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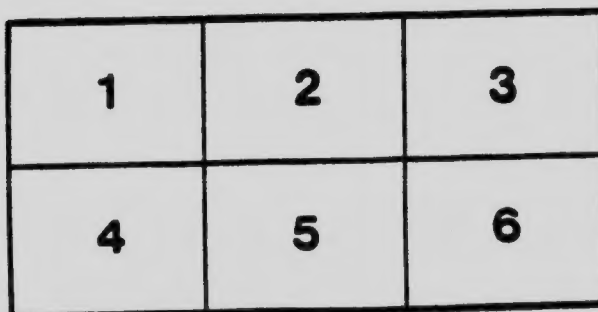
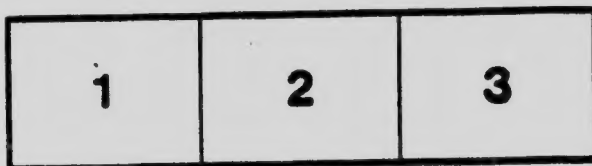
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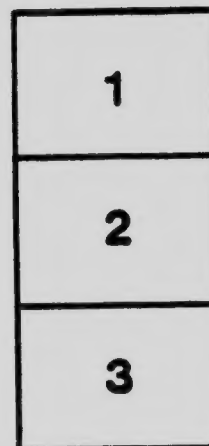
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THE PUBLIC SCHOOLS OF OTTAWA

A SURVEY



C. E. MARK

NORMAL MODEL SCHOOL

Ottawa, Ont.

1918



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C. E. MARK (1)

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1918 (5)



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REPORT OF EXAMINERS.

April 17th, 1919.

To the Registrar

University of Toronto

We beg to report that the thesis of Mr. C. E. Mark on "The Public Schools of Ottawa", together with his discussions of the questions set on the History of Education, the Science of Education, Educational Psychology and Educational Administration, qualify him for the degree of Doctor of Pedagogy.

Signed: H. T. J. Coleman

W. E. Macpherson

P. Pakenham

Peter Sandiford

To the Senate of the University of Toronto :

I hereby certify that the thesis above-mentioned has been accepted for the degree of Doctor of Pedagogy, and that Mr. C. E. Mark has complied with all the regulations in accordance with the Statute in that behalf.

Signed: James Brebner,

Registrar.

University of Toronto

April 25th, 1919.

KEY TO REFERENCES

A list of authorities and sources of information is given on page 108. Reference to any of these, throughout the book, is made by use of the corresponding number. This is followed usually by the page, or, in cases of annual publications, by the year and then the page. Thus (5:35) refers to page 35 in Dewey's "Schools of To-morrow", and (14:1916:27) refers to page 27 of the Public School Inspector's Report for 1916.

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CONNAUGHT PUBLIC SCHOOL



FOREWORD

In these days of much tabulation and graphical representation, even the more intangible entities, such as social forces including education, have with much profit been subjected to the processes of exact measurement. Many areas in the United States have already been intensively surveyed in such a way as to set forth clearly their educational excellences and deficiencies. In Ontario, however, this method has not as yet been widely applied and it was thought that Ottawa—a city with a special claim on the interest of all Canadians—would provide a field well suited to a pioneer effort along these lines.

The absence of a similar canvass of other Ontario centres, and the fact that there is no Federal Bureau of Education to gather the necessary data, render difficult, if not impossible, that comparative work at once so interesting and so significant. Certain tables have, however, been introduced from time to time, containing some facts relating to two other cities. One of these is Hamilton, a city with approximately the same population as Ottawa; the other is London, Ontario, which has a Public School enrolment almost as large as that of Ottawa.

There is a further reason why a survey of the educational facilities of this city should be undertaken at the present time. The movement for a greater Ottawa has been gaining headway; the desire for the formation of a federal district is taking possession of the public mind; the proposal has already been endorsed by the votes of the ratepayers of Ottawa and Hull; the report of the Federal Plan Commission is now under consideration.

Before any definite steps are taken towards a reconstruction of the city, its educational assets and requirements should form a determinant in the problem, quite as vital and important as the architectural, transportation, or industrial factors. The consummation of this impending change in the capital's status will be fraught with revolutionizing effects upon its educational system. It will mean a transfer from provincial to federal control. The local administration will possess greater freedom than at present to adapt its course to local needs. At the same time it will be closely articulated with all the other educational interests and activities of the larger federal body.

Some of the suggestions and recommendations contained in the following pages have been made with this federal control in mind. They would otherwise be quite impracticable and meaningless.

Owing to space limitations and to the inaccessibility of certain information, the present work will be confined to an examination of the Public Schools of Ottawa, after a brief glance at the field as a whole.

Grateful acknowledgment is made here of the invaluable aid rendered by all the school officers in so readily throwing open their various departments for inspection, and by many government officials in supplying data from their records. Many suggestions have also been received from surveys and reports to which frequent reference has been made throughout.

CHAPTER I.

THE GEOGRAPHIC AND ECONOMIC BACKGROUND.

Whether education be defined as the attempt to promote the fullest adaptation to environment, or, better, as an effort to render man master of his environment, it is important to have some idea of just what those circumstances and conditions are with which he is destined to grapple. Accordingly it has seemed advisable at the outset to give a brief sketch of the city, the schools of which are to be the chief concern of the following chapters.

Ottawa, the social and political capital of Canada, has grown up on the reputed site of an Indian encampment, which Champlain discovered on his overland route to the Huron country in 1615. The Chaudiere Falls and the confluence of the Rideau and Gatineau rivers with the Ottawa at this point contributed much at that time to the making of a popular rendezvous for trade and social intercourse. Add to this, later, the Rideau Canal and the nine lines of steam railway which enter the city, three of them trunk lines, and Ottawa becomes easily accessible from all points of the compass.

Fortunate in her situation, Ottawa possesses wonderful potentialities in the wealth of natural scenery at her doors. From Parliament Hill, a high bluff one hundred and fifty feet above the river, one looks across to a spur of the Laurentian system covered largely, even yet, with virgin forest. Two waterfalls of striking beauty, with the rivers by which they are fed, and a canal almost as large and quite as beautiful constitute charms unsurpassed in kind by any city. These features, with others such as the Parliament and Government Buildings, the numerous historic monuments, and the eight hundred and fifty acres of park, including the Government Driveways, cannot fail to exert an important aesthetic and moral influence on the plastic minds of the youth of Ottawa. It is much to be regretted that the natural beauty along the river banks has been greatly marred by huge piles of lumber and wood. This is one place where the transformation of environment might well begin.

Almost midway between the equator and the North Pole, more than three hundred miles from the Atlantic sea-board and considerably more than two thousand miles from the Pacific coast, Ottawa possesses a continental climate subject to a wide range of variation in temperature. A rather large proportion of the precipitation comes in the form of snow, which frequently

remains in sufficient quantities for sleighing from early December to the end of March. Tables 1 and 2 show the temperature, precipitation, and hours of sunshine for Ottawa and Toronto, (21:1916:183) and (27:1916:20). These facts will have special significance in connection with regular attendance, cost of buildings, heating, and lighting.

Ottawa has an area of 5,295 acres which represents an increase of over two hundred and forty per cent during the last thirty years. The mileage of streets is 161, of concrete sidewalks 212, and of street railway tracks 36.

Table 1. Temperature, F. 1882—1916.

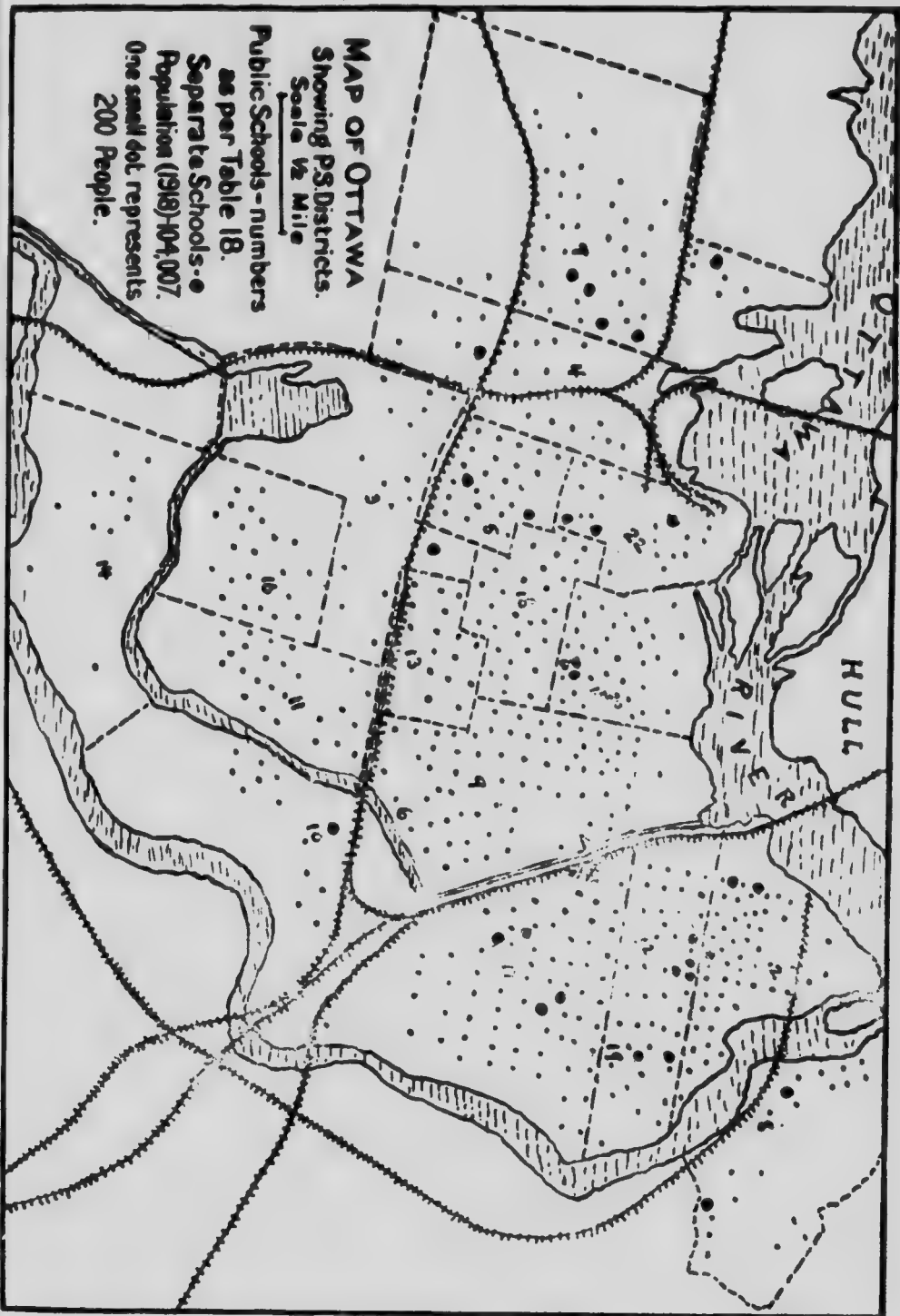
	Mean Winter	Mean Summer	Minimum	Maximum	Mean Annual
Ottawa	13.9	66.4	-21.2	90.9	43.0
Toronto	23.6	66.17	- 8.1	91.2	45.5

Table 2. Sunshine and Precipitation, 1888—1907.

	Days of rain.	Days of snow	I-ches of Rain.	I-ches of Snow	Total Precipitation	Hours of Daylight	Hours of Sunshine
Ottawa	124	58	24.7	87	33.4	4474.4	1874
Toronto ..	114	61	25.28	61	31.38	4474.4	2048

Unfortunately, much of the growth of Ottawa has been without plan or foresight. Like many other small towns, being unduly eager for expansion, Ottawa, in the early days, granted unwise concessions to railway companies. As a result, using level crossings they have gained access to the heart of the city from all directions and have divided it into many sections separated by barriers more or less difficult to cross. For example, on the Prescott line between Carling Avenue and Somerset Street, a distance of almost a mile, there is but one street crossing. On the Grand Trunk cross-town line between Bronson Avenue and the Canal, nearly a mile, there are but three crossings, two being subways. Thus it is quite apparent that the task of arranging school districts becomes exceedingly complicated, when these lines are again intersected by a river and a canal (see map). This difficulty has been further accentuated by the fact that industrial concerns have been allowed to locate wherever they could obtain the most favourable siding facilities and are, consequently, to be found scattered promiscuously throughout the city.

With her nearest competitors, Montreal and Kingston, each more than one hundred miles distant, due east and south west respectively, Ottawa, with her twin sister, Hull, has tributary to her a wide area abounding in varied resources.



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While Ottawa is not as yet preëminently an industrial centre, the presence of such immense water power at her doors, or within easy reach, ought to be favourable to this phase of the city's expansion. Within a radius of 66 miles 920,600 horse-power could be developed, whereas at present the amount utilized is but 70,000 horse power (29:247).

There were, just prior to the war, some 192 important industrial plants in operation, employing about 18,500 persons, male and female, (32:42). Some of the largest individual factories in the world producing paper, cardboard, tents and awnings, marine signals, and cement, are located here. The manufactured products of Ottawa, including lumber, amounted to \$40,000,000 in 1912. The cut of lumber in the Ottawa district that year was estimated at 559,000,000 feet, valued at \$16,800,000 (30:14). Owing to the earlier prodigal methods of culling timber, manufacturers have been compelled to draw upon the upper reaches of the Ottawa River for a supply. However, by means of careful steps already taken for conservation and reforestation, a constant supply is practically assured for the lumber industry and Ottawa may well continue to hold her place as the largest individual manufacturer of lumber in the world.

The surrounding district is rich in a variety of mineral products capable of much greater development. Sandstone quarries and mica, graphite, and molybdenum mines are worked to some considerable extent at present.

Another factor of considerable importance, and one which contributes much to the stability of Ottawa's prosperity, is the productive agricultural area, adjacent to the city and extending throughout the whole valley. In six neighbouring counties 1,588,000 acres, capable of production, devoted to dairying, stock-raising and grain-growing, yield, annually, produce valued at \$35,244,000. (27:25).

Ottawa became incorporated as a city in 1855 and was chosen capital of the United Canadas in 1859. Since that time her growth has been steady and consistent until, like most Canadian cities, it was impeded by the recent war. There is every reason to believe that this steady rate of growth will be resumed and maintained, and that, in the event of certain contingencies, such as the formation of a federal district, or the construction of the long proposed Georgian Bay Canal, it would be greatly augmented. The population as given in the assessment report for 1917, was 101,549. The Commissioners of the Federal Plan, appointed

in 1913, estimated that the population in 1950 would reach 250,000. Table 3 shows the population of Ottawa, Hamilton and London, Ont., for the past five decades (21:81).

Among the cities of Ontario, Ottawa ranks second highest in the proportion of Canadian born in her population, being surpassed in this respect only by London. Ottawa has, however, a higher percentage of foreign origin among her native population. A foreign element among a people, with widely different moral standards and political ideals, constitutes a peculiar problem for government and education. The number of foreign birth and of foreign origin is shown in tables 4 and 5. (21:91).

Table 3. Population.

	1871	1881	1891	1901	1911
Ottawa	24,141	31,307	44,154	59,928	87,062
Hamilton	26,880	36,661	48,959	52,634	81,631
London	15,826	19,746	22,281	24,415	46,300

Table 4. Foreign Born, 1911.

	Foreign Born.	Born in Canada.	Born in British Isles	Born in other British Poss'es
Ottawa	5,243	71,992	9,516	311
Hamilton	7,693	52,042	22,000	234
London	2,316	35,167	8,686	95

Table 5. Origins, 1911. (20:11:447)

	British Origin.	French Origin.	German Origin.	Italian Origin	Jewish Origin.	Other Origins
Ottawa	52,734	26,732	2,379	643	1,776	2,798
Hamilton	66,424	1,120	4,619	1,442	1,681	6,683
London	42,119	409	1,561	418	571	1,222

Table 6. Religion.

	1901		1911	
	R. Catholics.	Protestants	R. Catholics.	Protestants
Ottawa	30,525	29,403	43,245	43,817
Hamilton	8,872	41,226	13,057	63,087
London	3,506	19,885	5,262	38,856

The church connections of a population will have an important bearing on its attitude towards secular schools. In table 6 is given the numerical status of the Roman Catholics and Protestants for 1901 and 1911.

Ottawa has a large number of illiterate people. Illiteracy may be a product of racial, religious, economic, or other influences, but it would seem, from a study of table 7 to be very intimately connected with the two first mentioned factors. The data for school purposes would be more valuable, if given for seven years of age and over, instead of for five and over as at present.

The vital statistics for an average of three years, 1913-1915, show the natural increase per thousand of population for Ottawa to be 8.6. In the year ending October 31, 1917, there were 1737 deaths, of which 398 were of children under one year. Due allowance being made for the influences exerted by climate, economic status, and other factors, it is quite certain that a very direct relation would be found to exist between ignorance, such as is evidenced by illiteracy, and infant mortality.

Table 8 gives the figures for three Ontario cities.

Compared with some large Old W. cities, congestion and over-crowding of population are not problems with which Ontario cities have been greatly concerned, but even here this condition is beginning to exercise an important influence on health and education. The figures for housing conditions given in table 9 would indicate that Ottawa exceeds Hamilton in the proportion of families living under poor conditions, as well as in the number occupying houses obviously belonging to the wealthy.

Table 7
Illiteracy, 1911 (20:11:512)

	British Origin.	French Origin.	German Origin	Percentage of Illiteracy
Ottawa	52,734	26,732	2,379	7.06
Hamilton	66,424	1,120	4,619	4.56
London	42,119	409	1,561	2.64
Quebec	9,492	68,080	157	8.37
Kitchener	3,416	102	10,633	4.47
Toronto	325,173	4,886	9,775	3.69

Table 8.
Vital Statistics. (21.100)

	Ottawa.	Hamilton	London
Natural increase per 1000 Population	8.60	15.73	6.72
Deaths per 1000 Population	17.60	11.80	15.30

Table 9

Housing Conditions. 1911.

	Number of Families.	Number of Dwellings	Families Occupying						
			1 room.	2 rooms.	3 rooms.	4 rooms.	5 rooms.	6-10 rooms	11 rooms or more
Ottawa	16,801	15,831	13	225	292	737	1422	11,011	2,131
Hamilton . .	16,812	16,251	26	119	195	666	2019	12,305	921

Neither the very poor nor the very rich are the most vigorous supporters of public education. A comparison of the assessments for Public and for Separate Schools (see page 17) would indicate that pupils of the former come from homes with a higher valuation.

The occupations of a people also largely determine their active interest in education. As is to be expected in a capital city, many obtain employment in government offices. It was estimated that in 1915 these numbered 6,000 people, officials and employees, exclusive of the local post-office, customs house, museum and mint. (22:108). While there is a relatively large proportion of well educated people among the civil servants and official classes, many of whom have won their positions through intellectual contest in the competitive method of appointment, the advantage of this to the community is, to some extent, offset by the fact that many members of parliament and other officials have but a transient residence in the city. Hence these are not as active in civic affairs, educational and otherwise, as the permanent residents. Tables 10 and 11 are, respectively, concerned with workers classified according to the nature of employment, and according to age periods.

Table 10.

Workers by Occupations, 1911.

	Total		Government.		Professional.		Domestic.		Manufacturing.		Buildings, Trading, etc.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Ottawa	25,501	8362	4902	931	1208	1160	1399	3294	5,203	1658	12,789	1319
Hamilton . .	29,496	7932	1218	34	790	850	1165	1892	15,163	3815	11,160	1341
London . . .	14,423	5192	651	23	568	630	702	1330	6,102	2190	6,400	1019

Table 11.

Workers by Age Periods, 1911.

	10—14 Years.		15—24 Years.		25—34 Years.		35 Years & Over	
	M.	F.	M.	F.	M.	F.	M.	F.
Ottawa	222	134	6463	4192	17,964	3938	852	98
Hamilton	194	141	7992	4079	20,530	3641	780	71
London	89	44	3477	2542	10,260	2504	597	102

There are many other influences, at work in every city, of a more or less general character. A capital city, where men of prominence from all parts of the country are wont to be much in evidence, on the street, at public meetings, and in the homes of the people, provides an atmosphere that must exert a subtle influence on the boys and girls who see and hear these men frequently. The presence of parliamentary debates, large conventions, and influential deputations ought to stimulate interest in public questions to an unusual degree. It may be that these more intellectual interests do not affect the aesthetic natures of a people. At any rate it is a noteworthy fact, borne out by the testimony of artists and business managers alike, that Ottawa is a city, most unappreciative of good music. On the other hand, the many moving-picture houses carry on a thriving business and a professional hockey-match never fails to draw a crowd.

Important as are all these things, location, climate, nationality, religion, health, home conditions, occupation, and social influences, a system of schools cannot hope to rise above mediocrity without adequate financial support. Since, in the province of Ontario, about ninety per cent. of the cost of education is raised locally, a city's assessment roll and rate of taxation is of particular interest. The city with many churches, government buildings and other property entailing exemption from taxation, would seem to be at a disadvantage in the matter of revenue. The total assessment of the city of Ottawa for the year 1917 was \$153,390,972, but allowing for church, school, government, and other exemptions of \$42,068,737 there remains a taxable assessment of \$111,322,235 (28.2). Of this amount \$92,701,756 belongs to Public School supporters and \$18,620,479 to patrons of the Separate Schools. The rate of taxation for the former was 19.5 mills and for the latter 24.3 mills. Table 12 gives the proportion of revenue expended on each of the chief items of the city expenditure.

Table 12. Expenditure, 1916

	Education and Library	Fire.	Police and Justice	Health and Sanitation	Charity and Patriotic	Parks and Playgrounds	Interest and Sinking fund	Streets and Lighting	Adminis- tration.	Markets, Grants, etc.
Ottawa.....	26	6	7	12	1	2	23	13	8	2
Hamilton....	26	6	7	12	2	2	27	9	4	4
London.....	26	4	5	10	2	1	29	6	5	6

Recommendations.

1. All citizens of Ottawa, who are friends of education as well as all who possess a fair amount of civic and national pride, will urge the adoption of some approved plan of city reconstruction. Since this is already under consideration and is certain to materialize sooner or later, any needless postponement will but retard improvement, now urgently needed, but which must wait upon the improved plan of the whole. For example, any comprehensive building programme for schools or any scheme for the acquisition of sites for future needs cannot be launched until the traffic arteries, the residential and the industrial districts are fixed.

2. The schools do not need to wait passively upon municipal initiative in bettering neighbourhood conditions. The schools themselves may become an active factor in reform. One of the most practical ways of teaching civics is to actually grapple with some of the local problems. Campaigns for the beautification of the city, the clearing up of vacant lots, and insistent demands for improved conditions of living have been shown to be problems quite within the range of practicable school activities. (5:202 and 207).

CHAPTER II.

A GENERAL SURVEY OF THE EDUCATIONAL FIELD.*

Before a specific study is made of that part of the field with which this treatise is more particularly concerned, a brief examination of all the educational facilities afforded by the city will be attempted. This will give perspective and a better understanding of the limitations or the advantages due to the existence of either competitive or complementary and auxiliary agencies. Accordingly it will be necessary to mention the Public, Separate, Private, Church, and Government elementary schools, together with such institutions as provide for Secondary, University, and Business education.

The Public School Board, in 1917, was required to meet the needs of 8,867 pupils. This they accomplished by the use of a plant consisting of 23 school buildings valued with equipment at \$1,794,201, and by the employment of a staff of 250 teachers and supervisors at salaries aggregating \$265,957.37. (13:1917:136, and 19:17).

*(All statistics used in this chapter are for the year 1917)

The Roman Catholic Separate Schools, during the same year, provided for 9,416 pupils, using 33 school buildings proper and 9 annexes, valued with equipment at \$572,807.20, and employing 191 teachers at salaries totalling \$96,937. (13:1917:170). Unlike the Public Schools, they do not provide Kindergartens, Manual Training or Domestic Science centres. Neither do they employ supervisors for Art, Music, Writing, or Physical Training. A small number of pupils receive instruction beyond the eighth grade. Considerably more than half of the Separate Schools are bi-lingual. According to information obtained at the office of the Separate School Board, there are 5,558 pupils in the Bi-lingual, and 3,946 in the English Schools; 118 teachers are employed in the former and 82 in the latter. Seventy-nine of the teachers are Normal trained, 4 have first class certificates, the remainder hold third class or temporary qualifications.

The supporters of Separate Schools are assessed for school purposes at the rate of 10 mills on an assessment of \$18,620,479. The Public School rate is $5\frac{3}{4}$ mills on an assessment of \$92,701,756. The result of this higher rate of taxation has been that \$3,896,450 worth of property owned by Roman Catholics has been transferred to the Public School assessment roll, thus diverting \$38,964.50 from the support of the Separate Schools. The value of assessments for the French Schools is \$10,334,151, and for the English \$7,874,540. Notwithstanding, the English teachers, 36 less in number than the French, receive a monthly salary cheque of \$5,122.93, compared with \$5,025.59 for the latter. The cost of educating a pupil in the English Separate Schools is \$18.95, while in the English-French Schools it is \$13.50 per annum.

In the Bi-lingual Schools, the dual system of inspection has given rise to much opposition, owing to an alleged lack of co-operation on the part of the French and English inspectors, and a consequent impossibility on the part of the schools of complying with recommendations that sometimes conflict.

In the present classification a private school is regarded as one which is required to pay taxes, that only being exempt whose incorporation ensures its continuity quite independent of the personnel of the teaching staff or of a continued connection with the founder. Such a school possesses the greatest freedom in the matter of text books, curriculum, and general arrangements. It also sets the standard of attainment required of its teachers.

As continued success, however, depends upon satisfied patrons, the work is generally of a satisfactory character.

One such school for girls enrolls 60 pupils, 30 in the elementary grades and 30 doing secondary work leading to matriculation into McGill University. Another with an enrolment of 35, confines its efforts to secondary instruction, preparing students for matriculation or Entrance to Faculty of Education. Still another accepted 18 pupils for elementary work up to the sixth grade only. This school uses the Departmental texts and course of study with the addition of French. A school for the teaching of French and Latin had 90 students, many adults, on the roll. Another private venture drew its students from those employed in the Civil Service or from those preparing for it. It had 35 studying for the examination admitting to the Second Division clerkships, which in a general way, corresponds in difficulty and range of work to the Entrance to Faculty of Education. Some combine the languages with this work so as to obtain matriculation standing at the same time. The recent reorganization of the Service will materially affect the nature of the work carried on here. In addition to these already mentioned, there are many small classes varying from one to seven or eight pupils conducted by private tutors.

Ottawa has three large Business Colleges offering short and complete courses, varying in length from three months to one year. Each college conducts night as well as day classes for the convenience of those who are employed during the day. Their total enrolment was 1,715. Besides these three, there are schools which specialize in certain subjects. One class, exclusively stenography, registered 50 students. A telegraphy school had 158 enrolled. This latter has recently added a wireless department. Another school, offering a complete business course, admits no men students and limits the number of girls accepted to 15.

The International Correspondence School offers courses in almost every conceivable subject of study. Many people, more particularly artisans who wish to improve their status while engaged in their regular occupation, are taking advantage of the opportunity afforded through such instruction by mail. There are now 150 students registered but the Secretary estimated that fully 600 people in Ottawa were pursuing studies, at various stages of advancement, under their guidance, though temporarily off the roll.

Ottawa is particularly well provided with corporate institutions, more or less independent, but having various affiliations. Three orders of sisters of the Roman Catholic Church have established convents here, two of which are affiliated with the University of Ottawa. These two lead girls from the earliest school age to matriculation. Their courses are conducted on the dual language plan, as contrasted with the bi-lingual, in which the complete curriculum is covered for each pupil in either English or French, according as she may elect, while one hour per day is devoted to the study of the second language. Together they have an enrolment of approximately 700 pupils, 430 of whom are in the elementary classes. While exact figures could not be obtained, slightly less than ten per cent of these pupils are non-residents, some from considerable distances. A large proportion of the city attendants are day pupils, the remainder being boarders.

The third convent offers a course in French with two hours daily devoted to English. Boys and girls are accepted here from the ages of six to eleven. Of the 30 pupils, one-half are from points outside the city.

The Sisters of the Church of England conduct a school, financially independent of the church, but with church officials and clergymen as visitors and in an advisory capacity. This school is open to boys in the first grade only, while girls are continued to matriculation. The pupils here, all day pupils, number 100, of whom 85 are doing elementary work.

A school for boys is conducted by the Christian Brothers of the Roman Catholic Church, with 150 in its elementary classes and 100 engaged in a four-year secondary course.

Just outside the city is Ashbury College, controlled by a trust foundation. It offers courses of instruction to boys ranging from ten years of age up until they matriculate. As this institution is modelled largely after the English Public Schools, the chief point of departure from the courses offered by the regular schools of the city consists in the earlier introduction of foreign languages, geometry, and algebra. The enrolment, day pupils and boarders, was 75. Of these, 39 were from the city. Affiliated with this is a preparatory school, receiving boys to the age of 10, and girls to 14. There are 31 in attendance, all from Ottawa.

Of schools, financed and controlled wholly by the church, there are few. The Presbyterian Church conducts a residential

college for ladies, accepting a limited number of non-residents. The work covers the traditional elementary and secondary ground. Here, as in the two larger convents previously mentioned, commercial work, music and painting receives attention. Of the 150 students, 70 are in elementary classes, the remainder doing more advanced work.

The Lutherans conduct two schools with a combined enrolment of 215. They add religious knowledge to the ordinary Public School work. The adherents of this church maintain these schools and pay taxes for the support of the Public Schools as well. Of course, all persons who send their children to any place other than a Public or Separate School, must directly or indirectly pay two rates.

Connected with each Jewish synagogue, a school is conducted where the children of their belief are assembled each day, after having attended the Public School. Here they are given two hours further instruction in religious knowledge and in the Hebrew language. This, no doubt, solves the bi-lingual problem for these people, but, surely, at the expense of too great a tax upon the health and happiness of young pupils.

The Daily Vacation Bible Schools are not church schools, being non-sectarian and interdenominational and being supported by voluntary contributions from all classes and creeds. The Public School Board recognizes this movement by allowing the use of some of its school buildings and by making a small vote of money towards expenses. This coöperation is justified by the fact that, while Bible instruction is the primary purpose of the schools, they also give instruction in music, industrial art, and organized play. There were 10 schools in operation with a staff of 117 teachers and an enrolment of 1,135 pupils from 3 to 14 years of age.

The secondary instruction provided by public funds is given in two buildings, the Collegiate Institute, and the Technical and Commercial High School. The number of pupils enrolled at the former, including the commercial classes, was 1,044, of whom 149 were in commercial work, 542 in the Lower, 321 in the Middle and 32 in the Upper School. (13:1917:218).

Under the advisory Industrial Committee of the Collegiate Institute Board, evening classes in certain technical subjects were established in 1913. These have been continued, and in 1917 day classes were begun in the Technical School. For the

day classes no age limitations are imposed, and pupils may be admitted from the seventh grade of the elementary schools. Half of each school day is devoted to practical work in the shops and work-rooms. The evening classes are patronized chiefly by men and women desirous of improving their status as workers in the various trades and occupations pursued by them during the day. In these classes 1,617 people were enrolled in drafting, design, woodwork, electricity, building construction, carpentry, plumbing, heating and ventilation, trade courses, cooking, sewing, dress-making, and millinery. The enrolment in the regular day classes was 57, in special day classes 181, in war-time cookery 86, and in a special class for woodwork and cookery 32. Thus there was a total of 1,973 students taking advantage of the instruction offered here. Several of the Public Schools where manual-training or domestic science facilities permitted, have been requisitioned for certain of the evening classes. The aim of this school is well stated in an announcement sheet issued by the principal: "to do for the workers what the Collegiate and the Commercial School has been doing for those entering professional or business life."

The Department of Soldiers' Civil Re-establishment duplicates some of the work undertaken by the Technical High School. While it is obvious that much of the work of this department, carried on in the Ottawa centre, will be for non-residents and that the responsibility for it is not for a municipal body but for the Federal Government, yet it is difficult to understand why, in the interests of national economy, arrangements could not be made whereby existing facilities could be utilized.

The Department of Education for Ontario maintains in Ottawa and keeps under its immediate control several schools engaged in, or connected with, the training of teachers. The Normal School, with a staff of five masters and five special instructors, gave instruction to 213 teachers-in-training. In connection with this is a Normal Model School to provide facilities for practice teaching. This is frequently inadequate for the purpose and classes in one or more Public Schools are then used as well. The Model School consisting of the seven grades, Kindergarten-Primary, and Kindergarten, covers the course of study laid down in the regulations for Public Schools, with French in addition. The staff of 13 regular teachers, with the assistance of special instructors in Art, Music, Manual Training, Domestic Science, Physical Training, and French, had charge of 424 pupils. Except in the Kindergarten classes boys and girls are taught separately.

An English-French Model School, conducted in a rented building, trains teachers for work in the bi-lingual schools. The entrance requirements are proficiency in the Lower School subjects and a knowledge of French Grammar and Composition. There were 16 students-in-training here, receiving instruction from two masters, one English, the other French. During the summer session of this school, 67 teachers took the course. One of the schools under the Separate School Board is used for practice teaching.

The Department of Education for the past two years has also conducted a summer school for the training of Kindergarten-Primary teachers, using one of the Public School buildings and one of their classes for demonstration lessons. The first of these summer sessions was attended by most of the city Kindergarten teachers, to whom was given a course in primary work. This year a class of 15 primary teachers was trained in Kindergarten methods.

The University of Ottawa, conducted by the Oblate Fathers, holds a charter granted by the crown in 1866, and ranks as a Catholic University since 1889. Its degrees are officially recognized throughout the British Empire. Six courses are offered, Preparatory, Business, Collegiate, Arts, Philosophy, and Theology. The Preparatory course extends over three years and corresponds to what is generally classed as elementary education. There were 110 students enrolled for this work. The Collegiate Division preparing for matriculation had 220 students. In Arts, Philosophy, and Theology there were 367. Of the 697 students on the roll, 212 were residents of Ottawa.

The Dominican Fathers have a class of 15 students, graduates of various outside preparatory colleges, who devote their whole time to the study of Theology and allied subjects.

The Redemptorist Fathers also conduct an institution for students preparing to join their order. There are 30 students entered for a six-year course in Science, Philosophy, History, and Theology, in preparation for which they must have previously completed a six-year classical course.

There are several auxiliary educational agencies, mention of which cannot well be omitted in this chapter. The Young Men's Christian Association was the pioneer in the field of evening classes but has now surrendered this work to the Technical High School. It now proposes to take up a new line of edu-

educational work by way of providing help for students taking extra-mural classes for University examinations.

The Young Women's Christian Association continues evening classes. The enrolment was 32 in English Literature, 10 in Elocution, 76 in Dress-making, 28 in Cooking, 407 in First Aid, 305 in Home Nursing, 22 in Hygiene, 293 in Gymnastics, and 587 in Swimming. Classes in some of these subjects are also held in the afternoon. The Hintonburg Branch carried on a class in elementary English subjects with 7 students.

The Boy Scouts Association supplements the efforts of the school by maintaining a high standard of discipline, strengthening the moral fibre, and broadening the intellectual interests. The efforts to secure the coveted proficiency badges give power of concentration and persistency. In Ottawa there are 448 Boy Scouts.

The movement in connection with the Canadian Standard Efficiency Tests proceeds on somewhat similar lines. Stress is placed here on the four-fold development of the boy, intellectual, physical, religious, and in service. Fixed standards of attainment are used so that a boy may be charted according to his proficiency along each line of endeavour. Affiliated with various churches there are 23 groups of boys, totalling 225 members, enlisted in this work.

Various government departments have initiated educational activities which contain wonderful possibilities. The Dominion Entomologist has given a series of lectures, illustrated by specimens and slides, to pupils of the Public Schools. Arrangements for illustrated lectures have been made by the officers of the Museum and the Geological Survey. These have, to some extent, been temporarily interrupted by the requisition of the Museum building by Parliament after the destruction of the Parliament Buildings by fire. Most of the lectures given were to Normal School, Collegiate Institute, and Public School audiences. The range of work may be best judged from a few of the lecture subjects: "Winter Birds"; "Where Animals Spend the Winter"; "Indian Houses"; "Indian Games"; "Ranch Life in the West"; "How Mountains are Made"; "Irrigation". The Dominion Observatory is thrown open to the public on Saturday evenings with a competent member of the staff in charge. The number of school children who take advantage of this opportunity averages from 12 to 15 per week the year round.

The Playgrounds Association, in conjunction with a committee of the City Council, provides facilities for organized, supervised play during the summer vacation. Nine playgrounds, containing 29 acres, fitted with apparatus, and provided with supervisors, are maintained at a cost of \$2,580 for salaries. Some 4,700 children made regular use of these playgrounds. The same committees managed two swimming pools during the summer and three open air rinks during the winter.

One other important educational factor remains to be mentioned, the Library. The financial interest of the people of Ottawa in this agency is represented by a tax-rate of $\frac{1}{4}$ of a mill on the taxable assessment. This yields only about 25 cents per capita, (13:1917:97). As it is estimated that adequate service requires an income of 35 cents per capita, the inference is that either the demand for books is too low or the service is poor, or, possibly both conditions may obtain. The reading interest was evidenced by a total circulation of 256,628 books and magazines, about 64% of which was fiction. The juvenile circulation at the Central Library was 40,061 of which 55% was fiction. There are five branch libraries in addition to the central building. Still another medium for the distribution of books—the school—has been utilized. The Library Board of Ottawa was a pioneer in instituting the method of placing portable collections of books in the three upper grades of the Public Schools. A set of books suitable for grade 5 is to be added as soon as finances will warrant it. The circulation of books by this method was 13,895. Librarians also render much assistance to the students in supplying reference material for essay-writing and debate. On Saturday mornings during the winter months a story-hour is conducted by one of the library staff assisted by volunteer Kindergarten teachers. Special library privileges are accorded to teachers along with members of other learned professions, inasmuch as they are permitted to borrow a greater number of books and to keep them for a longer time than is granted to the general reading public.

While it is obviously impossible to make the numbers in the following summary absolutely mutually exclusive or collectively exhaustive, as, for example, a student at the Collegiate Institute may occasionally be found in the night classes of a Business College, or as some small tutorial classes are almost certain to have been overlooked, yet Table 13 is submitted as a reasonably complete and accurate statement of the numbers affected by the formal educational activities of Ottawa.

Table 14 gives a comparative statement of pupils enrolled in the various schools controlled by the Department of Education.

Table 13. STUDENT SUMMARY, OTTAWA

	Elementary.	Secondary.	Commercial.	Technical.	Teacher Training.	Under & Pt. Graduate.	Totals
Public Schools	8,597	....	270	....	....	....	8,867
Separate "	9,227	....	189	....	....	....	9,416
Private "	48	190*	1,938	150	....	....	2,326
Foundat'n "	726	460*	....	....	....	....	1,186
Church "	285	80*	....	....	....	....	365
Collegiate "	....	895	149	....	....	....	1,044
Technical "	....	....	....	1973	....	....	1,973
Gov'n'm't "	424	....	....	....	229	....	653
Univers'y "	110	220*	....	....	....	367	697
Other Institutions	....	....	....	....	....	45	45
Totals .. .	19,417	1845	2,546	2123	229	412	26,572

A small proportion of those marked with an asterisk (*) take the commercial work offered by their institution.

Table 14. COMPARATIVE STATEMENT.

	Public.	Model.	Separate.	Collegiate	Technical		Total
					Day	Night	
Ottawa .. .	8,867	424	9,416	1,044	238	1,352	21,341
Hamilton .. .	14,542	....	2,647	740	289	850	19,068
London .. .	8,145	....	1,127	984	107	721	11,084

RECOMMENDATIONS.

1. The successful realization of recommendation 1, Chap. I., would entail a complete reorganization of the educational forces in Ottawa. The withdrawal from provincial control, which is implied, would remove certain constitutional impediments which now beset the situation. Therefore it is strongly urged that, with the advent of the new arrangement, the best thought and most skilful diplomacy be employed with the end in view of effecting a satisfactory unification of the present dual system of schools. The interests of efficiency and economy (thoughts very much in the foreground of late), economy both of money and effort, demand some such readjustment. This movement for unification should also be made to embrace the Collegiate Institute Board, bringing the entire field under the control of a Board of Education with a Superintendent of Schools as its chief administrative officer.

2. Children between the ages of 8 and 14, unless exempted for other specific reasons, are required to attend a school conducted under the regulations of the Department of Education, if not "under efficient instruction at home or elsewhere". Reference to Table 13 and allowance for those who are taught at home would indicate that there is a large number of children of school age in Ottawa not in the Department's schools. Much of this instruction is, no doubt, quite satisfactory, yet no adequate steps are taken to ascertain that these children are receiving their dues of "efficient instruction". As retardation of a pupil, for even one year or less, is a serious matter for that pupil, some provision for the inspection of all instruction should be made. At present this is a matter for the Legislature to deal with rather than for the city.

3. The Public School Board has given over the field of instruction during the summer holidays to the Daily Vacation Bible Schools. These schools are beyond doubt serving a useful purpose, but it is not what is most required by the Board. In order to meet the needs of backward pupils or of those who have missed much of the regular term through illness, classes, perfectly co-ordinated with the work of the regular grades and in charge of trained and qualified teachers, should be conducted. The course should have a large proportion of handwork, supervised play, and music, and as much as possible, should be conducted in the open air. A minimum of the subjects essential to promotion to the next grade should be given.

4. A maximum amount of work in the open air would prove advantageous, not alone to these vacation classes, but to all grades, especially where there are pupils in a delicate state of health. Certain class rooms could easily be constructed so that one side could be thrown open when the weather is suitable. The top floor of one of the Toronto schools is specially designed for open air work.

5. Mention has been made of the educational work done by various government departments in connection with the schools. So far, this has been rather spasmodic and has been left largely to the initiative of the individual teacher or principal. With such a wealth of material in the way of specimens, slides, maps, diagrams and reports, and with government experts who are willing to co-operate by giving lectures, some more systematic plan should be devised so that all the schools might profit by the unsurpassed opportunities at their very doors.

6. The administration of affairs connected with the playgrounds, in the interests of economy, co-ordination of resource, and efficiency of management, should be placed in the hands of the School Board. A greater consolidation among the authorities planning for the acquisition and management of school sites, playgrounds, and park areas would ensure greater returns to the young people who are, after all, most concerned.

7. The people of Ottawa, according to statistics gleaned from the Public Library report, read an average of approximately 2.5 books each per year. While this would be considerably augmented by private libraries and by the large Parliamentary Library, yet the latter is not generally accessible to the reading public, and the showing would still be lower than it should be. Since the desire for good reading and the habit of satisfying this desire must be inculcated at an early age, during the school life or very likely not at all, pupils must early be brought into intimate contact with many books suited to their age and individual tastes. This can only be adequately accomplished by a fuller use of the Public Library. Better service must wait upon a larger library revenue, which in turn, but awaits legislative sanction for a higher library rate. When this is secured the School Board representatives on the Library Board must see that the needs of the various grades are fairly considered in the larger expenditure. This will be but an expansion of the policy already inaugurated for the schools to the full extent of present available means.

CHAPTER III.

SITES, BUILDINGS AND EQUIPMENT.

The location of school sites must necessarily be largely determined by the natural topography of the city and the artificial barriers, such as railways and canals. The handing over of the central portion to the more intense business requirements forces the residential areas farther out and, as a consequence, the school needs here are greater. The nature of the population will also affect the problem. A city or a district with a homogeneous population of Public School supporters will have an entirely different situation from districts where the Private, Church, Separate, and Public School patrons are mixed in varying proportions. The policy of the Board in favouring large or small schools will also regulate the size of the district to be served from a particular school site.

An examination of Table 15 will reveal the size of schools
Table 15. SIZE OF SCHOOLS AND DISTRICTS

	No. of Public Schools	Area of City, in acres.	Average size of Sch District	Average No. of rooms	Schools of 4 rooms or less	Schools of 16 rooms or more
Ottawa	23	5,295	265	9.6	3	4
Hamilton	23	7,143	357	17.2	3	13
London	23	6,302	350	9	6	5

and school districts in three Ontario cities. In the calculation of the area of school districts, schools with 4 rooms or less were added together and reduced to schools of average size for that city. With a district of 265 acres, it will be exceptional for any pupil to walk more than 200 rods.

Five schools are on streets with car-tracks but in every case the schools were built first. This shows the fruit of a short-sighted town-planning policy. The danger to young pupils and the dust and disturbance made by street-cars is exceedingly objectionable. The Glashan school is also much too near the Grand Trunk sidings where shunting engines must seriously interfere with the classes on that side of the building.

With the growing recognition of the importance of play and open-air exercise, it might be expected that the more recently acquired sites would be characterized by ample play-ground space. One factor, however, tends to interfere with this commendable policy--the greatly enhanced value of land, with almost prohibitive prices in certain districts. The first land to be owned by the Ottawa Public School Board was the Bolton and George Street properties, the former containing less than half an acre, the latter nearly seven-eighths. In 1912, a 2½ acre lot, not yet built on, was secured. Table 16 shows the areas of sites for the Ottawa Schools.

Table 16. AREA OF SITES.

Area in Acres	Less than ½	Between ½ & ¾	Between ¾ & 1	Between 1 & ¼	Between 1¼ & 1½	Between 1½ & 1¾	Over 2
No. of Sites	1	4	6	5	2	2	1

There is an intimate relation between the area of the sites and the size of the buildings. Several schools already suggested

cannot be enlarged without encroaching on play space already too small, while the values placed on adjoining land seem to render expropriation unwise. The minimum allowance for play-space, as recommended by the Board of Education for London, England, is 100 square feet per pupil. (3:75). Table 17 gives

Table 17. PLAY-SPACE PER PUPIL

Area in Square feet	Less than 30	Between 30 & 50	Between 50 & 75	Between 75 & 100	Between 100 & 125	More than 125
No. of Grounds ..	1	1	6	4	4	4

the unbuilt-on area for the Ottawa schools. This shows that the London standard constitutes a medium for the Ottawa grounds. There is a well marked tendency in the right direction here.

The play-grounds at most of the schools have been variously covered with gravel or cinders but even these were noticed to be quite dusty in dry weather. Some of the more newly acquired grounds, for example at Elgin Street or Hopewell Avenue, are of clay or sand and consequently are several inches deep in dust when dry and are muddy in wet weather. This is not a healthy place for play and much dust is carried into the school-room as well.

Most of the schools are to be commended for efforts to have space in front with well kept grass plots. Several add to this ornamental shrubs and flower beds. Most of the older schools have shade trees of considerable size and all the newer schools have hopes in young saplings that have been set out. The permanent influence of these touches of beauty upon pupils' aesthetic tastes and upon their attitude to school associations is most important.

The Public Schools of Ottawa are of solid brick with the exception of one stone building. The schools represent various stages in the evolution from the earlier dwelling-house type as embodied in George Street, 1867, or the older part of Creighton Street, 1866, to the more distinctively school type of architecture as exemplified by Connaught School, 1913. Many of the older buildings have been remodelled and enlarged from time to time, incorporating such changes and improvements as were rendered urgent by overcrowding, or by advancing standards of hygiene, sanitation, and fire protection. All the new schools are of fire-proof construction and all buildings with third floors are equipped with fire-escapes.

Built on comparatively small lots, as indicated in Table 16, some buildings could be placed with no choice as to the direction of their longitudinal axis. For example, Elgin Street and Osgoode Street Schools, on the given lots, had no alternative to their present position. This fact will have considerable significance when the problem of lighting is considered.

Several schools are not the regulation distance from the street. Some, such as George Street and Creighton Street, were built before such restrictions were imposed, but it is surprising to find a school as recent as Cartier Street, 1905, at fault in this respect. The object in thus placing buildings nearer the street was, no doubt, commendable, inasmuch as it aimed at a maximum amount of space for play in the rear; but the 30-foot requirement in front affords all too small an opportunity for lawn or landscape gardening, referred to above as so desirable.

The Ottawa School Board has apparently committed itself to the policy of the moderately sized school. The Senior Inspector recommends, as a maximum, a school with from 16 to 20 class-rooms; such a school is "large enough to secure economy of administration and small enough to secure efficient management." Such schools, as Ryerson in Toronto, are fully twice as large as the largest Public School to be found in Ottawa. Table 18 gives information concerning various points connected with size and value of the Ottawa Schools.

In a city with such a rigorous winter as prevails at Ottawa (see table 1), the problem of heating and ventilation must receive careful attention. All schools, with the exception of Evelyn Avenue Kindergarten and the Orphans' Home, are heated by steam. These two use hot air and hot water respectively. Sixteen buildings are ventilated mechanically, the remainder by gravity. Theoretically, windows are to remain closed but in practice they are allowed to be regulated at the discretion of the teacher. While double windows are used in winter, they are provided with two hinged panes. In all the later schools, the fresh air intake is well removed from the ground; in some cases it is in the roof. Part of the benefit of this precaution is lost in several cases where it was noticed that the fresh air chamber is used as a store-room for tools, oil-cans and much other material. On leaving this chamber the air is washed in most cases by passing through a wall of coke from 6 to 8 inches thick, into which water is constantly pouring. To prevent air from any part of the basement, other than the fresh air room, from being drawn up into the main ventilating shaft, an independent system

Table 18.

THE SCHOOLS OF OTTAWA

	Assessed Valuation		Floor area in Square feet	No. of Class rooms	No. of Rooms occupied	No. of Kindergartens	Manual Training Domestic Science Assembly Hall	No. of Seats	No. of Empty Seats
	Land	Buildings							
1. Bell St. Shop.....	\$ 2,900	\$ 3,000	5,795	2	..	..	..	195	58
2. Bolton St. School.....	7,000	11,000	25,565	3	3	1	..	705	153
3. Borden School	6,500	67,250	15,804	15	11	1	..	375	23
4. Breeze Ave. School.....	12,400	42,000	27,484	7	7	1	..	585	22
5. Cambridge St. " ..	24,125	40,000	14,380	16	13	1	M.T.; D.S.	375	49
6. Cartier St. " ..	21,500	25,000	16,317	7	7	1	..	735	131
7. Connaught " ..	12,250	92,000	28,800	17	13	1	M.T.; D.S.	735	131
8. Creighton St. " ..	6,550	27,000	16,317	9	8	1	M.T.; D.S.	735	131
9. Elgin St. " ..	31,000	60,000	7,084	12	11	1	M.T.A.H.	555	46
10. Evelyn Ave. " ..	..	..	30,976	4	4	1	M.T.D.S., A.H.	225	32
11. First Avenue " ..	19,500	74,100	8,102	15	13	1	..	645	0
12. George St. " ..	14,200	7,000	20,829	5	4	1	..	240	24
13. Glashan " ..	19,775	43,700	37,570	12	11	1	M.T.	555	39
14. Hopewell Ave. " ..	30,650	109,500	15,929	21	12	1	M.T.	885	234
15. Kent St. " ..	18,000	34,700	26,039	13	8	..	M.T.D.S.	304	34
16. Mutchmor St. " ..	13,450	60,000	23,401	12	11	1	M.T.	555	10
17. Osgoode St. " ..	17,700	52,000	22,669	11	10	1	M.T.A.H.	600	27
18. Percy St. " ..	18,000	51,300	6,421	12	11	1	M.T.	555	17
19. Rideau St. " ..	10,400	13,000	3,492	4	6	..	..	180	17
20. Robinson Primacy ..	10,900	2,500	9,251	3	..	..	M.T.	144	43
21. Slater St. School.....	15,000	21,800	9,892	5	5	..	..	285	7
22. Waller St. School.....	28,500	13,700	9,290	4	4	1	M.T.D.S.	180	6
23. Wellington St. " ..	8,900	14,000	18,638	8	9	1	M.T.	130	0
24. Orphans' Home	15,900	30,000	10	10	1	..	..	472	36
25. Ottawa East	6,675	..	..	..	..	..	..	45	0

of exhaust is operated to draw off this air from below. Thus there is a constant current of air towards this duct, located in the lavatories, instead of outward towards the stairway, or towards the crevices around the door leading to the fresh air chamber. By this means the air in the basement is changed every ten minutes. The humidity of the air is automatically regulated, moisture being supplied in some buildings by jets of water-spray, in others by the injection of steam. The temperature in the class room is read four times daily during the winter by the janitor and recorded by the teacher on forms which are forwarded to the office of the Superintendent of Buildings. A thermograph is sometimes used by the Superintendent to check up the work of a janitor when it has become careless or unsatisfactory.

Good lighting conditions are equally important with proper temperature and fresh air supply, in affecting the health, comfort and quality of work of both pupils and teacher. It is a factor, however, to which less intelligent consideration has been given, in general, by either architects or those more immediately concerned with the effects. It is also a factor which is more difficult to control. It would not be impossible to find a Public School room in Ottawa where light is admitted from both sides. Fortunately, where this obtains, plans for a new building are already being prepared. It is more surprising, however, to find in schools, much newer, rooms with lighting from the left and from the rear. The resultant cross-lights are injurious to the pupils' eyes and much more so to the teacher's, although, strange to say, two principals, when questioned concerning this point, spoke in praise of this method of lighting. The most recent buildings have adopted the unilateral system but with some grave defects. A typical class-room in Connaught School, 26 feet wide and 33 feet long, had 5 windows, each $3\frac{1}{2}$ feet by 8 feet. This falls short of the minimum requirements for window space (15:233). In Elgin Street and Cambridge Street Schools strips of masonry, 5 feet in width, occur between the windows. As a result of this, in addition to an uneven distribution of light, many class-rooms have at least one window thrown too far forward. It is not uncommon to find windows 6 feet beyond the front seat. This creates a condition most trying on the eyes of pupils in the inside row of seats.

If the shape and size of the grounds permitted, the problem of light exposure would be the most influential factor in determining the orientation of buildings. There can be no doubt of the desirability of having sunshine in every-class-room, both on

account of its cheerful effect and for antiseptic reasons. At the latitude of Ottawa, this is only possible from three sides, east, west, and south. Light from the south necessitates the use of shades or shutters to such an extent that the inner rows receive insufficient light. Lighting from the east, during the months when the daylight-saving scheme is in operation, is open to the same objection for the first hour or more of the school day. As has been already intimated Elgin Street School, from the nature of its site, had no choice but to have many classrooms facing south and north. In the latest building, Connaught School, however, the same excuse can hardly be given for having rooms with light from the north. London, Ont., has experimented with a one-story building admitting light from above (31:50). The lighting conditions here are reported as highly satisfactory but the expense for heating is unduly great and the first cost for sites would render such a plan impracticable except in a suburban district. The overhead lighting could easily be adopted for rooms on the second floor.

The class-rooms in the Ottawa Schools are unnecessarily large. This tendency is being corrected in the newer schools, but further reduction in size is still needed. The interests of economy in building and heating, the difficulty of proper diffusion of light, the problem of hearing, the range of vision for work on the black-board, and a reasonable limitation placed on the size of classes, are all strong arguments in favour of smaller rooms. The departmental regulations recommend a room 32 feet long, 25 feet wide, and $12\frac{1}{2}$ feet high. This would limit the number of pupils to 40. In most of the schools here, the ceilings are 14 feet high, though the plans for the next school call for $13\frac{1}{2}$ feet ceilings. The widths of rooms at present range from 26 to 29 feet while the maximum length of any room measured was 33 feet. The result on the seating capacity of classrooms is shown in the case of Glashan School, which, with all regular class-rooms occupied, had 530 single desks, an average of 48 seats per room. The plans for the next building still call for rooms from 26 to 28 feet wide, on the expectation that box-desks will become more general and they require more room.

A number of classes were accommodated in places not originally designed for class-rooms. The third storeys of Elgin Street, Osgoode Street, and First Avenue Schools, and a large room on the second floor of Percy Street School have been thus requisitioned. The light in some of these rooms is quite inadequate. Such an arrangement can only be temporary pending

the erection of a new school and the readjustment of school districts.

There are several types of wardrobe in use in the Ottawa Schools. At Elgin Street provision is made in the wide corridor by a partitioned space, open at the top, adjoining each class-room and opening into it by two doors. At Connaught School a similar cloak-room is incorporated in the class-room behind the teacher's desk. In Borden School what is known as the Chicago wardrobe was used. This requires much less space, being but 3 feet wide, and was installed here at a saving of \$8,000 on a 16-roomed building. In all the more recent schools the wardrobes are ventilated either by having the out-going air from the class-room escape here or by a separate flue, thereby ensuring a circulation of air to dry damp clothing and at the same time preventing it from afterwards reaching the class-room.

The three Assembly halls, at Elgin Street, Osgoode Street and First Avenue Schools, are on the third floor. The floors are level, which constitutes a disadvantage quite unnecessary where halls are not used for other than auditorium purposes. At Elgin Street the hall is of poor shape being too long and too narrow. The policy of the school architect for future buildings is to put the assembly-hall in the basement, making provision for sufficient light, and using wooden flooring and other appropriate finish.

Nineteen schools have Kindergarten rooms, all of which are on the first floor. Manual training centres have been established at 13 schools and Household Science centres at 5. The Manual training room at Kent Street School is particularly well equipped for work by older and more advanced pupils. The Household Science class here provides a school lunch for pupils at cost.

All schools, with the exception of Kent Street and 4 smaller buildings, have play-rooms in the basement, separate for boys and girls, where they may play in wet weather. These are airy, well-lighted, and provided with seats around the walls. The floors in most cases are of cement, but several have been made quieter and less dusty by a layer of asphalt.

The Ottawa School authorities have not spared expense in endeavouring to provide adequate lavatory accommodation of the most approved type. The requirements of departmental regulations (23:15) have been fully met in most cases and where

the number of pupils slightly exceeds the accommodation, as at Percy Street, the congestion, if any, could be easily relieved by arranging for certain classes to take intermission at different times. The closets are flushed by means of seat-operating devices and urinal stalls by means of an automatic flush. There is no gradation in height of seat or urinal for the smaller boys and hence no provision for segregation, which, for moral reasons, is advisable. For purpose of better lighting and to facilitate inspection, a better arrangement in the lavatory would be to place all stalls and seats around the walls thus leaving the centre of the room open. There are no screens or doors on the front of closet stalls and hence the natural sensibilities of the child and the desire for privacy, such as is always provided for in the home, are not given due consideration. Nevertheless, when the present sanitary arrangements were installed in most of the schools, the then Chief Inspector for Ontario stated that in the matter of pure air and sanitary lavatories Ottwaa was second to no city in the province.

The problem of sanitary drinking arrangements has been solved by equipping all the schools with the most approved types of fountain taps. At a number of schools, however, the city has sunk artesian wells for the use of the general public. The use of individual drinking cups is not insisted on here and the cold water is tempting to the pupils.

Every regular class-room in the Ottawa Public Schools is equipped with blackboards of a good quality of slate. Temporary rooms have boards of hylo-plate installed. A hygienic chalk, eraser, and chalk-trough are also supplied. The back wall and other portions of wall not covered with blackboard are fitted, to a height of six feet, with burlap over soft wood which provides a place suitable for mounting pupils' work.

All rooms are furnished with single desks, chiefly of the shelf type though box desks are supplied to grade 8 classes. About 10 per cent of the desks are adjustable and an effort is being made to equip the two outer rows of each room with this type. In the primary grades movable desks are being substituted for the older stationary variety. In many cases the edge of the desk was observed to be vertically above the edge of the seat. This defect—the failure of the desk to overlap the seat—was occasioned, in one room at least, by an obvious attempt to keep desks of different sizes in rows, across the room as well as lengthwise. The tops of the desks are stained a mahogany colour and an effort is made to secure a dull finish so as to dispense with the dazzling glare occasioned by a high polish.

The general colour scheme of rooms calls for woodwork in natural colours; walls and ceilings on sunny rooms are a greenish grey; in darker rooms they are a light buff.

Any attempt at decoration in the class-room is left largely to the genius and initiative of the teacher with advice from the Art supervisor. A picture of the king and queen, and a Union Jack are to be found in almost every room. In some of the schools, the halls and rooms are hung with a number of very good sepia prints, copies of famous masterpieces or photographs of famous buildings. These have been purchased with the proceeds of "Art Exhibitions" which have been held by these schools, pictures having been loaned or rented for the purpose. In most rooms, where sunlight will permit, bulbs and various other flowering plants are kept in pots and window-boxes under the supervision of teacher and pupils.

RECOMMENDATIONS.

1. In Canada we are not accustomed to the idea of a city or a School Board buying land for speculative purposes, but surely the community has the best right to benefit from any unearned increment on land values. At any rate, there can be no objection to a School Board showing sufficient foresight to purchase grounds sufficiently large for school needs, quite in advance of their building programme. These should be carefully selected from areas towards which the city's growth shows marked tendencies. Indeed, where the School Board possesses the full confidence of the public, the building programme need not always wait on the clamour for school accommodation. It may quite as reasonably lead the way and become a determining factor in the drift of city expansion. People will be eager to build in the vicinity of a wisely placed school. (34:40). The Ottawa Board has already secured one lot in advance, $2\frac{1}{2}$ acres on Main Street. Similar provision should be made for the needs of the western and southern parts of the city where extension is bound to occur. It can also be but a matter of a short time before the municipality of Eastview will be annexed so that this whole field should be considered in the present plans of the Board. From 3 to 5 acres should be the size of all school grounds to be acquired in the suburban districts.

2. The present school grounds, or a certain portion of each, owing to the very intensive use of the small play space, should be covered with a surface that will prevent the dust that invariably rises from clay or cinders. Some of the many tar-paving or asphalt combinations would be most satisfactory. (9:78).

3. The School Board has already had plans prepared to replace the Rideau, George, and Bolton Street Schools by a large central school but hesitate to launch the undertaking under present war conditions. It is recommended that this postponement be made as brief as possible. While it is quite likely that it would be easier to finance such a project after the war, there is no certainty that post-war conditions will bring immediate relief. While, again it would be very desirable to have plans for the city's reconstruction made known first, yet these are not likely to alter the fact that better school accommodation is urgently needed in this particular district. Any temporary expedients resorted to during the postponement are certain to prove costly because they can only be temporary. And what is still more important, the pupils who are deprived of the needed improvements can never be compensated for their loss. Coming from a district in which there is a large foreign element, these children are sadly in need of the influences of more sanitary and more aesthetic surroundings at school. Many projects with a merely material bearing may very well wait but the ideals and characters of children, many or few, are too valuable to be readily sacrificed.

4. The following three suggestions concerning buildings are made, as contributory to the health of pupils. (a) Lighting requirements should receive consideration prior to all other architectural conceptions excepting those which add to health or stability. The antiseptic power of direct sunlight is most important in rooms occupied by so many people and for so long a time. (b) The corners of rooms and corridors should be so rounded that dust can be easily removed. (c) Fresh air ducts should be so constructed that they may be periodically cleaned. Even after the most careful washing of the air, it may be easily demonstrated, by placing a piece of tangle-foot fly paper in the duct, that a variety of microbe-laden material gradually accumulates here. (4:134).

5. The size of class-rooms in future buildings should be kept to a minimum. A modern fire-proof building should last a century. The present tendency towards smaller classes will almost certainly continue and long before these buildings are replaced classes with more than 30 pupils will be quite exceptional. (15:124) and (18:634).

6. Provision for the assembling of the whole school on special occasions, or of groups of classes for instructional purposes, or provision for community use in the evening, renders an

assembly-hall or auditorium an indispensable feature of a modern school. It should have a place on the first floor and should be easy of access and egress. It should be so arranged that the rest of the building could be closed independently. Auditoriums at present in use in Ottawa schools cannot well be altered, but in future buildings they can be made to serve a larger place in school or community life. Should a special room on the first floor for an assembly-hall be thought too expensive, a very satisfactory alternative can be provided by so arranging that the Kindergarten room may be thrown open and joined to the lower floor corridor. Such an arrangement may be seen in several of the newer schools of Toronto, for example, Regal Road.

7. As the school is taking over more and more responsibility for the physical welfare of the child as well as for his mental training, a swimming-pool becomes a necessity. The logical place for the first one in Ottawa is just where the proposed new school will be placed, in a district where sanitary influences will bear most fruit. The economical time to instal it is, of course, during the erection of the building. At the earliest opportunity, a second pool should be located at a centre convenient for the schools in the western part of the city.

8. Environment has much to do with the formation of ideals and standards of judgment. Compulsory attendance renders it obligatory upon school authorities to make the school and its surroundings attractive and ennobling in its influence. The grounds, buildings, and equipment should exhibit chastity in design, balance in spacing, and harmony in colour. It should be a place such as will please and call forth a pupil's admiration. Each should be able to feel a genuine pride in his school. Much has already been accomplished in this direction in Ottawa. It is the intention here merely to urge the continuance and extension of this work. More interest in the condition of school grounds might be manifested by teachers, janitors, and pupils generally. This would doubtless be quickened were the Board to institute a competition among the various schools. The Board should vote a certain amount toward the purchase of pictures, suitable in theme for the halls and various grades. Permission granted to schools to raise money for this work by entertainments would give pupils a more personal interest in it. The establishment of a fund for such a purpose would likely interest some public-spirited citizens to help by generous donations.

Pupils should be given more opportunity to give expression to artistic principles acquired in the Art classes by taking some active part in school decoration both inside and on the grounds.

CHAPTER IV.

TEACHERS.*

The physical organism imposes certain limitations and reacts powerfully upon the mind, but it is the latter that dominates and gives direction and personality. The school plant exerts an important influence, but it is the teacher that is the animating principle giving meaning and dynamic. Wherever there is a Socrates or a Pestalozzi, there would be found scholars and there also would be found that subtle radiating influence, that interchange of spirit, that action and reaction which is the soul of a school. That city is most fortunate which can attract persons with this true teaching spirit or which can induce and sustain such a spirit in those in charge of its schools.

The Ottawa Public School Board employs a teaching staff of 250 teachers and supervisors, classified as shown in Table 19.

From the enrolment for 1917 in the regular grade classes, it is found that the average number of pupils per teacher for the three cities is 46, 46, and 45 respectively. For the cities of the province it is 47. Thus the conditions in this respect are fairly uniform, but they are uniformly putting too much upon the teacher.

Table 19. Number of Teachers. (19:15, 12, 7).

	Teachers No. of	No. of Sup- ervisors.	No. in Regu- lar grades.	No. of Kin- dergarten.	No. in Manual Training	No. in Domes- tic Science	No. in 8th	No. of Relief Forms
Ottawa	245	55	183	29	6	6	8	13
Hamilton	353	5	319	25	4	5	....	....
London	212	6	177	28	4	3	....	....

One of the things greatly to be regretted in the teaching profession is the steady decline in the ratio of male teachers. In this respect Ottawa has not suffered as acutely as many other cities. It has not been affected by the war as some other places

*Note: All statistics are for 1917 unless otherwise stated.

owing, not to any lack of loyalty, but, to the fact that almost all the male teachers here have assumed the responsibility of a home of their own. Of the regular grade teachers, in Ottawa 42 are men, in Hamilton 17, in London 32. In percentages this is approximately 23, 5, and 18 respectively. Throughout urban Ontario the percentage of male teachers is nearly 13. There is no doubt but that in the interests of athletics, discipline, and manly ideals for boys, a fair proportion of male teachers must be attracted to the profession. This can be accomplished only by a modification of conditions of service and salary schedules.

While scholarship and training can never make a high-grade teacher out of a candidate wholly unadapted to the work, yet a good teacher is all the better for the wider scholarship which is implied in a higher certificate. Teachers with higher certificates cost more money but they are a good investment. The deeper culture, the broader vision, the better sense of perspective gained from further study cannot but make that teacher a saner, safer guide and custodian for the most important resource of which a country can boast. Table 20 gives the grade teachers classified according to certification. It is noteworthy that Ottawa ranks high in the number of first-class certificates and particularly in the number of University graduates. Hamilton's splendid showing in the matter of first-class certificates may in part be due to the fact that, prior to 1907, it was the seat of the Normal College.

Table 20. Certification of Teachers.

	Total No.	First Class		Second. Class		Third Class		Graduate	
		No.	%	No.	%	No.	%	No.	%
Ottawa	204	48	24	156	76	..	..	21	10
Hamilton	319	113	35	197	62	9	3	....	....
London	177	18	10	159	90	....	....	....	....
All Ontario									
Cities	2,916	528	19	2,276	81	11	.4	108	3.8

Within certain limits the value of a teacher to a school increases with experience. The good teacher keeps an open mind and continues to grow for many years. At the same time, the good teacher will develop rapidly and reach a high state of efficiency in a few years. The indifferent teacher very soon atrophies and becomes a time-server, mechanical and lacking in inspiration. By careful and kind criticism and advice from

principal, supervisor, and inspector many should be saved from this fate and should improve with experience.

Closely related to the amount of experience is the question of age. Pupils in the Public Schools require in a teacher the spirit of buoyancy and enthusiasm that so frequently disappears with advancing years. This problem can only be met when an adequate pension scheme is provided. Statistics subsequent to January 1918, will probably show a lowering in the age average for the province. Table 21 shows the age and experience of Ottawa teachers for the present year, 1918.

Table 21. Experience and Age, 1918.

Total Experience.	No. of Teachers	Experience Outside Ottawa	No. of Teachers	Age.	No. of Teachers
1 to 5 yrs.....	47	None	40	20 to 25 yrs.	34
6 to 10 "	65	1 to 5 yrs.....	88	26 to 30 "	59
11 to 15 "	42	4 to 5 "	46	31 to 35 "	41
16 to 20 "	41	6 to 10 "	48	36 to 40 "	38
21 to 25 "	29	10 to 15 "	20	41 to 45 "	43
26 to 30 "	13	16 to 20 "	8	46 to 50 "	18
31 to 35 "	13	21 to 25 "	4	51 to 55 "	14
36 to 40 "	1	Over 25 "	1	56 to 60 "	6
Over 40 "	1			Over 60 "	1

Throughout the cities of the province, 50 per cent. of the teachers have had from one to ten years experience and 27 per cent. more from 11 to 20 years, while 41 urban teachers have been in the profession for over 40 years. (13:1917:150). The fact that Ottawa has no teachers who should be retired on account of age is due to the fact that this city had in operation a very satisfactory local pension plan before the provincial scheme was adopted. The average length of experience for all teachers in Ontario cities is 13.58 years, in Ottawa it is 13.8 years. For male teachers in urban Ontario the average is 18.43 years in Ottawa 20.86 years. For female teachers the city average is 12.88 years, in Ottawa it is 12.3.

In the matter of experience, it will be of advantage if some part of it has been obtained in schools outside of Ottawa. This gives a wider knowledge of school needs, conditions, methods, and standards of work, and cannot fail to bring with it many elements of value. Reference to Table 21 will show that this has been given due consideration by the Ottawa Board. The same principle obtains within the city schools, an experience in differ-

ent grades and schools, and association with different principals will generally prove beneficial. Some teachers will require an almost periodic transfer to prevent work in any particular room from becoming too much of a routine affair. The extent to which this has been worked out in the Ottawa Schools has been tabulated in Table 22. In addition to the changes indicated here, the members of the occasional staff, later made permanent, have had exceptional opportunities for contact with the meritorious features of many different schools. No doubt many of the transfers have been effected with little thought of the broadening influence on the teaching staff, but in order to meet the various exigencies of the organization in the way of promotion, or experimentally to find a place better adapted to a teacher meeting with indifferent success.

Table 22. EXPERIENCE, BY GRADES AND SCHOOLS.*

Experience in	No. of Teachers	Experience in	No. of Teachers.
1 Grade	111	1 School.....	103
2 Grades	45	2 Schools	61
3 "	26	3 "	39
4 "	22	4 "	18
5 "	11	5 "	9
6 "	4	6 "	3
7 "	2	7 or more	3

By use of data supplied by the record cards kept concerning teachers since 1911, it has been possible to arrive at the average length of tenure of office for Ottawa Public Schools. The result, especially for male teachers, is not entirely satisfactory inasmuch as the number of cases in which teachers for various reasons have severed their connection with the Ottawa Public Schools, and the period of time for which figures are available, are both inadequate for a close approximation. The average tenure for males is 11 years and for female teachers 6.4 years. Of the 9 men and 105 women who have left the employ of the Ottawa Public School Board since 1910, 2 have died, 9 have been pensioned, 6 have taken positions in the Civil Service, 15 have taken positions in other schools (mostly of higher grade), 7 have been dismissed, the fate of 19 is unknown, while 56 resigned to take charge of homes of their own. Nearly 40 per cent. of the last mentioned group were lost at the end of the first year and according to the records the Board is not immune from the danger of loss from such a source until teachers have passed the 22nd year of service.

*Note: The data in the card Index in the Inspector's Office is not complete on this point.

The only way to effect a lengthening of the term of service is to render the conditions of teaching more attractive. Unnecessary restraints, impositions, and causes of annoyance should be removed. As far as possible the surroundings should be comfortable, healthful, and beautiful. Frequent occasions for enjoyment, encouragement, and reward should be created. The joy inherent in the work of teaching must be left so untrammelled that there will be no envy of one's many neighbours in the Civil Service with shorter hours and less strenuous work. It must not be that other employees with practically the same qualifications are able to maintain a higher standard of living. In order to retain the services of the best teachers in the profession, they must be enabled to maintain their self-respect and must be relieved of undue financial worry.

In determining what is a fair salary for teachers several factors must be considered, such as, the cost of living at that particular place and the residential advantages which it offers. The relative cost of a weekly family budget including food, fuel, and rent, in several cities for the past decade, indicates that Ottawa must offer a relatively high rate of salary, as shown in table 23.

The extent to which teachers' salaries, in Ottawa and in Ontario cities collectively, have kept pace with this advance in the cost of living is shown in table 24. Thus it becomes apparent that Ottawa teachers beginning with a salary higher than the average for Ontario cities have received substantially larger increases. This relatively generous treatment has been continued for the two subsequent years. A comparative statement of salaries for 1917 is given in table 25.

Table 23. COST OF WEEKLY FAMILY BUDGET

Ottawa								
1907	1909	1911	1913	1914	1915	1916	1917	Increase
\$10.149	\$10.714	\$12.354	\$14.339	\$15.798	\$16.142	\$18.640	\$21.139	108%
Hamilton								
10.681	12.141	12.305	13.653	13.680	14.613	16.496	20.576	93%
London								
10.515	10.938	11.394	12.814	14.203	14.723	18.242	21.088	101%

The following salary schedule became effective January 1, 1918 :

1. "The Inspectors may recommend to the Management Committee at its November meeting in each year that any teachers, who have not reached the maximum salary for their class, be moved forward on the salary schedule two or more years instead of one year. Such recommendations shall be made only in the case of teachers whose class-room work is so much above the average as to entitle them to some special consideration.

Table 24. SALARIES OF TEACHERS, 1907-1916 (13:1917:118)

	1907		1912		1915		1916		Increase	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Ottawa	1166	602	1529	706	1715	831	1749	851	50%	41%
Ontario cities	1157	592	1320	703	1502	779	1535	789	33%	33%

Table 25. TEACHERS' SALARIES, 1917. (19:1917)

	Ottawa	Hamilton	London
Average salary, Male	1778	1645	1424
Average salary, Female	861	752	771

2. Kindergarten teachers now giving morning service may ask for permission to work the full day. Such applications shall be considered on their merits and reported on to the Board by the School Management Committee.
3. In order to secure experienced teachers, either male or female, the Management Committee may, when a new appointment is being made, recommend that the initial salary be increased by an amount not exceeding the first two annual increases.
4. Principals holding first-class certificates shall receive a salary of \$1800 for their first year's service, \$1900 for their second year's service, and thereafter they shall receive as many annual increases of \$100 each as there are class-rooms above six in their schools, including a Kindergarten room, but not including Manual Training or Domestic Science rooms, but no principal shall, under this schedule, receive a maximum salary above \$2600.
5. Male assistants holding permanent first-class certificates shall be paid \$1300 for their first year's service and

shall receive thereafter annual increases of \$100 until a maximum of \$1800 is reached.

6. Male assistants holding permanent second-class certificates shall be paid \$1200 for their first year's service and shall receive thereafter annual increases of \$100 until a maximum of \$1600 is reached.
7. Female teachers holding permanent first-class certificates or holding degrees in Arts, who teach classes not lower than grade 5, or who teach in a class used for practice by Normal School students, or who teach Domestic Science, shall be paid \$750 for their first year's service and thereafter shall receive annual increases of \$50 up to a maximum of \$1300.
8. Female teachers holding a permanent first-class certificate or degree in Arts, teaching classes lower than grade 5, female teachers holding permanent second-class certificates, who teach regular classes, or who teach Domestic Science, and Kindergarten teachers in charge as directors, and giving full day service, shall be paid \$650 for their first year's service, and shall thereafter receive annual increases of \$50 up to a maximum of \$1200.
9. Kindergarten teachers, holding director's certificates or Kindergarten-Primary certificates and giving full day service as assistants, shall be paid \$600 for their first year's service, and shall thereafter receive annual increases of \$50 up to a maximum of \$900.
10. School nurses shall be paid according to the provisions of this schedule for female teachers holding permanent second-class certificates.

At the present time, October, 1918, the female teachers have strongly petitioned the Board for a new schedule, ranging from \$1000 as minimum to a maximum of \$1600.

While it has not been possible to secure data concerning the salaries of other professional classes, yet it will be interesting to compare the salaries (or wages reduced to a yearly basis) of certain other classes of employees in the community. Among these have been included two classes in the civic employ, who, like teachers, are servants of the people. Table 26 sets forth figures showing the increase for a decade in several cities. From this it is seen that in Ottawa the rates of increase are respectively

66, 80, 32 and 41 per cent. as compared with the 50 per cent. increase in the salaries of male teachers. (Table 24). Allowance being made for the influence of labour unions in the case of the first two mentioned, printers and carpenters, it would seem that the greater part of the increases granted have been brought about by the economic law of supply and demand. The larger increase for male teachers is probably due more to the scarcity of supply than to a greater public recognition of the value of services rendered. The attractive positions in the civil service, open to men with academic qualifications equivalent to those of teachers, tend to keep salaries up in the Ottawa Schools. The School Board here has been quick to recognize this condition, and the 1918 schedule is second to none in the province.

Table 26. SALARIES OF OTHER EMPLOYEES, 1908-1917*

	Printers		Carpenters		Policemen		Firemen	
	1908	1917	1908	1917	1908	1917	1908	1917
Ottawa	\$754	\$1248	\$650	\$1170	\$840	\$1110	\$700	900
Hamilton	832	1274	936	1030	840	1113	804	1112
London	676	1092	842	1081	894	1089	756	1095

*Note: Statistics used here were furnished by the Department of Labour.

Quite as important as good treatment meted out to the teachers after appointment is a careful method of selection. During the past ten years there has been an average yearly increase of 314 pupils requiring from 8 to 10 additional teachers. This increase has been greatly reduced during the war. The average length of tenure of office for all Ottawa teachers being nearly 7 years, it will require about 37 teachers to replenish the yearly loss to the staff. Therefore in normal peace times, provision will need to be made each year for securing 45 new teachers. In Ottawa the only way, in which a candidate's name can come up for consideration by the Management Committee, is through a recommendation from the Inspector's office. This is most commendable and applies quite as much to the question of a promotion as to a first appointment. This should obviate the undesirable element of personal influence and reduce the whole matter to one of merit. A recent violation of this rule by a teacher desiring advancement gave rise to complaints from members of the Board, who had been canvassed, and resulted in a circular letter being sent out proclaiming their strong disapproval of such a procedure.

The greater number of teachers are secured by consultation with the staffs of the Training Schools—the Normal Schools and Faculties of Education. For this purpose the local Normal School affords excellent opportunities for seeing prospective candidates at work. As these candidates have usually done much of their practice-teaching in the city schools and some of them have received their earlier schooling here as well, to regard this as the sole source of supply would result in a policy of “in-breeding” that could not fail to prove a weakness. Recourse is also had to advertising and the confidential reports of Inspectors, whose good judgment has been attested, receive careful consideration. Less than 25 per cent of the teachers now on the staff had their homes in Ottawa before appointment. (14:1916:10). As far as can be judged from the incomplete card records, slightly more than 35 per cent were trained in the Ottawa Normal School.

Care in the first selection of candidates and the further precaution of a temporary appointment for one year or, in the case of female teachers, an appointment on the occasional staff should result in a body of permanent teachers of considerable merit. Furthermore, there is no such thing as appointment for life in Ottawa, as the engagement may be terminated at any time by giving the required notice whenever there is evidence of continued unsatisfactory work. This is always preceded by kindly counsel and warning, which, if ignored, is followed by a request for a resignation. A copy of a recent letter, making such a request after carefully reviewing the whole case, was found among the files of the Inspector's office. The 7 dismissals in as many years should be sufficient reminder to those grown weary in well-doing as to the certain outcome of such a course.

As already intimated, promotion, too, depends upon the quality of service rendered. The principle of seniority does not outweigh other and more important considerations. This policy was briefly and clearly enunciated by the Board's chief official: “If an appointment to a principalship were to be made to-morrow, the man best qualified would get the position.”

Teachers are required to be at school at 8.45 a.m. and 1.15 p.m. For the purpose of ascertaining the punctuality of teachers, a time-book is provided which each is expected to sign on arrival at the school. Among people with such training, among teachers so carefully selected, among those striving to inculcate this virtue in others, instances of non-punctuality should be exceedingly rare. Nevertheless, it was found that cases of late-

ness were quite common. For example, one teacher, with 11 years' service to her credit, had been late 208 times and other records almost as bad were not rare. While some records were remarkably good, with perfect scores throughout, yet the average number of lates for each female teacher is 2 per year and for males it is .64. There are indications of a slight improvement in this respect as the average number of lates during 1917 for all teachers was but 1.5.

The School Board requires a medical certificate, on a form which it supplies, from every teacher before appointment. It is not expected that this precaution will prevent all subsequent illness, but it should greatly reduce the amount of lost time from that cause. During the tenure of the present members of the staff, over 43 years of time is represented by absences of one month or more. Counting only intermittent absences of a few days at a time 8464 days have been lost, or an average of 3.5 days for each teacher during each year of service. For 1917, in addition to leaves of absence, the amount of time lost for each teacher averages 5.5 days. Of course, this record is also made up of many who have seldom missed a day, 58 teachers having lost 5 days or less during their whole period of service, while others have consistently been absent each year for a period of time approximating the legal allowance for sick leave. (Data taken from the card index of teachers in the Inspector's Office).

Punctuality and regularity are but two of the earmarks of the faithful and conscientious teacher. In order to further judge of their ambition, breadth of interest, and professional spirit generally, a questionnaire was submitted to 150 teachers, including the following questions:

1. "Have you, while teaching, completed any definite course of study leading to a higher certificate or degree? What?"
2. Are you now pursuing such a course? What?
3. For what educational journals or magazines do you subscribe?
4. How many lectures of the Ottawa Teachers' Lecture Course did you attend last autumn?
5. Have you travelled in Europe, United States, Western Canada, or elsewhere? Where?
6. Have you a special interest or hobby outside of school work? What?

7. Are you a member of any society or organization outside of school? What?
8. What suggestions have you to make for improvement of the Public Schools of Ottawa in buildings, equipment, organization, or conditions of service?"

These questions were distributed through the office of the Senior Inspector with a circular letter from him requesting that they be given prompt attention. Answers were to be anonymous as to school and teacher. Only 64 answers were received, 17 being from male teachers. As it is a justifiable inference to conclude that these represent the more progressive and professionally alert element among the teachers, an analysis of their answers is given as affording a basis for a judgment of the whole.

If exception be made of the certificate in Physical Training, which every Ottawa teacher holds or is expected to obtain, and the Kindergarten-Primary certificate which was demanded of some of the primary teachers as a condition of appointment, 49 have not completed any course of study while teaching. The other 15 have obtained the following certificates: Entrance to Faculty of Education, 4; Professional First Class, 4; Bachelor of Arts, 6; Master of Arts, 1; Bachelor of Pedagogy, 3; Inspector's, 1; Art Specialist, 1; Commercial Specialist, 2; Manual Training, 1; Agriculture, 1. Obviously some of these teachers have earned more than one certificate.

As to the number now pursuing studies, 11 have entered on courses leading to certificates as follows: Professional First Class, 1; Bachelor of Arts, 4; Doctor of Pedagogy, 4; Inspector's, 1; Commercial Specialist, 1.

While the mere holding of a certificate is not a guarantee of teaching ability, the significant fact, in connection with the efforts denoted above, is that the teacher with the ambition and the application necessary to thus forge ahead under difficult conditions, is the type of person to exert a beneficial influence upon a class. Some of the teachers were fortunate enough to have obtained their professional First Class Certificate and some a degree in Arts before entering the profession. A question raises itself here which admits of various answers, as to when one ought to rest content with present attainments.

Another indication of professional growth and of effort to keep abreast of the times, may be found in the number and character of the periodicals read, containing current educational literature. The somewhat meagre advantage taken of this source

of help is shown by the fact that 30 teachers of the 64 do not subscribe for any educational publications, 13 take "The School", 11 the "Canadian Teacher", 7 "Primary Education", 1 "Industrial Arts", 1 "Normal Instructor", and 1 "Physical Culture". The names of many other well known journals were not mentioned.

For some years past the Ottawa Teachers' Association has arranged for a course of 5 or 6 lectures, given by men of wide repute. Last autumn, 1917, the series consisted of 5 lectures by eminent men from Canadian University and political life. The lectures have been uniformly interesting and thought-provoking. The spirit of loyalty to their own association should ensure the support and attendance of teachers. Out of the 64 answers, 9 teachers had attended the whole 5 lectures, 10 teachers 4, 8 teachers 3, 9 teachers 2, and 7 teachers 1. Twenty-one teachers had not been present at a single lecture.

It is a fact universally conceded, that travel exerts a broadening influence upon one's sympathies, views, and general culture. The narrower, provincial outlook of the "stay-at-home" could not well be otherwise. Certainly the teacher should be quick to embrace any opportunity to profit through this means of education. A large number, 29, have visited Western Canada, 28 have travelled in the United States, 8 in Quebec and the Maritime Provinces, 6 in Europe, while 17 according to their own statement have not been outside of Ontario.

Education should aim to equip people for a proper use of leisure time. To provide a means of recreation, to banish worries attendant more or less upon all professional work, the teacher needs an interest or a hobby with no direct bearing on school work. Gardening engaged the spare time of 13 teachers; music, 9; painting, 3; church-work, needle-work, and athletics, each 4; special war-work, 3; poultry-keeping, photography, and natural history each claimed one devotee; while 21 teachers made the sad confession of no outside interest.

The teacher in the elementary school, having relations with immature minds for much of the time, has great need of association with adult minds on other occasions. There are many clubs, societies and organizations that offer the best facilities for this intercourse. To take a proper place as a force in the community, it is incumbent upon the teacher to become identified with its

activities. Various church societies claim the allegiance of 24 teachers; 10 are members of fraternal orders; 8 belong to the Canadian Club; 3 to a University Club; 5 to athletic organizations; 5 to Horticultural societies; 2 to choirs; 1 to the Field Naturalists; 25 have no such connection whatsoever.

The last question, number 8 on the questionnaire, was designed to test the teachers' fearless independence and constructiveness of thought. It was found that 18 ventured to make some constructive critical suggestions of greater or less value. The remaining 46 were silent on this point. It is matter greatly to be deplored when teachers become so much a part of a system that all individuality and power of initiative is lost. A teacher should have the courage of his convictions and ought not to rest satisfied with conditions short of the best attainable.

The chief function of the school is not so much to master the mechanics of reading as to induce and foster a taste for and a habit of reading. The teacher cannot accomplish this unless she herself is a lover and reader of books. In Chapter II. reference was made to the special facilities offered to teachers in the use of the Public Libraries. It was discovered at the borrowers' desk in the Library, that 66 per cent of the Public School teachers had membership tickets. This is not proof that they use them but it indicates that at least 34 per cent fail to appreciate the rich store of material here which they can ill afford to ignore.

Another and very important factor of the teacher's qualifications which does not lend itself to exact measurement remains to be mentioned. An attractive personality and kindness of disposition are most valuable assets for a teacher. They create an atmosphere in the class-room and elicit a response from children that all other excellences combined fail to produce. It is evident that these two characteristics have been given a place of due prominence in the selection of teachers in Ottawa. Many visits to different class-rooms but strengthened the impression that there was, with a few exceptions, a splendid spirit of co-operation between teachers and pupils. Investigations were carried on in a manner suggesting partnership. The frank candour and freedom of expression on the part of pupils, both in and out of the class-room, betokened a confidence in the teacher that was very commendable. There was very little sign of the martinet among the teachers. During 1917 there were 407 corporal punishments administered, approximately an average of 2 per class-room. This but indicates that kindness is not incompatible with stern measures on occasion.

RECOMMENDATIONS.

1. In chapter III. from the point of view of acoustics and lighting, it was suggested that class-rooms were too large. From the point of view of the teacher, 45 pupils are too many. More teachers and more class-rooms to admit of smaller classes would mean greater cost, no doubt, but it would also mean less tax upon the teacher's nervous energy and a consequent gain in a longer tenure and less loss of time through illness. It would admit of a more personal relationship towards each individual pupil instead of treatment as a class. It would revolutionize class-room methods. It would facilitate the working out of that spirit already struggling for expression and commended in the preceding paragraph. It would enable the teacher to do more guiding and less driving. A maximum of 30 pupils per teacher would be in the interests of efficient instruction. (15:124) and (18:634).

2. One of the regrettable features of teachers' service is the brief tenure of the average female teacher. This is occasioned by many factors beyond the control of school authorities but much can be done to prevent leaks to other schools and to other professions. The means most readily available is the adequate readjustment of salaries. While the Ottawa Public School Board is in the van in this respect, it will have to go further yet. The average male teacher's salary is more than double the average for females. Of course, this is partly occasioned by the fact that a large percentage of the male teachers are principals but it still remains that women receive a much smaller salary than men for similar work in the class-room. While the scarcity in the supply of male teachers may compel a certain discrepancy and making allowance for added duties for men in the way of supervising athletics, a readjustment of salaries for women teachers is now due. The entrance of women into industrial and commercial life on a larger scale will affect the bearing of the economic law on supply and demand for women teachers. The exercise of the franchise by women will give force to the demand for an equalization of salary for the same grade of service. This demand should be met, in part at least, before an increased exodus from the ranks compels it.

3. The salary schedule for 1918, already quoted, provides for a fairly uniform rate of salary with certain allowances for grade of certificate, length of previous experience, and excellence of class-room work. This puts a commendable premium upon scholarship, successful experience and high standards of service.

More could be done however along the same lines. A certain fixed minimum salary at appointment and a certain number of fixed annual increases are desirable. Then in addition to the distinction now made between second and first-class certificates, encouragement should be given to further study by way of bonuses granted for evidence of courses taken during the summer holidays or during leave of absence, that should increase the efficiency of the teacher. Arrangements for extension courses of lectures on professional subjects or courses of professional reading would lend encouragement to this spirit of study. These have proved beneficial and popular where they have been tried. (12:1913:31:23). Similar recognition should be given for time spent in travel. This practice has been introduced into some city systems and travel, the itinerary of which has been approved by the school authorities, has been encouraged by allowing leave of absence for one year out of seven, with salary paid minus an amount required to pay a substitute at a rate nearer the beginning of the schedule. (12:1913:31:25).

It should be possible to make more allowance for previous experience, otherwise the services of many teachers of proved skill will be lost to the schools of Ottawa. It would be better to remove the fixed maximum as this allows the mere time-server, who just escapes dismissal, to eventually reach the same scale as the zealous teacher. It should be understood by all teachers that only meritorious work can obtain the highest material reward. The present schedule seems to provide an anomaly in the case of the first year's salary for principals. With his added administrative duties he is to receive the same amount as he has probably received for years at his maximum salary as assistant.

4. The questionnaire for teachers laid bare a weakness, which affected a large percentage of the teachers, a failure to evolve a many sided interest. Many evinced no interest in professional or other literature; they had no special leisure occupation; they took no part in community activities or social service, their general influence outside of the class-room is such as to discredit the social value of the teacher and to lower the standing of the profession as a whole. Their sins are largely sins of omission. Surely teachers should be among the first to seek to discharge the full duties of citizenship. They are men and women with exceptional qualifications and opportunities and not class-room teachers of children merely.

This unfortunate situation is due largely to the strenuous demands placed upon time and energy by the daily routine both

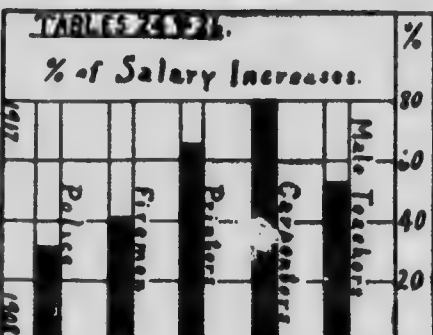
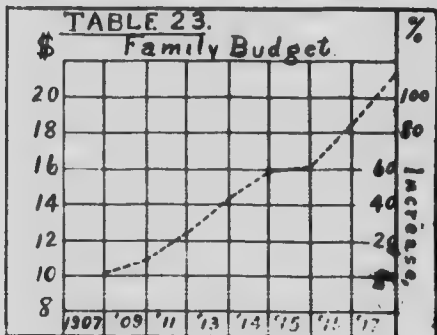
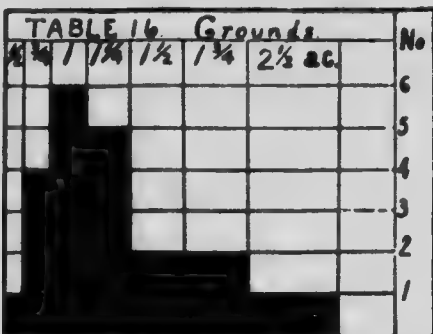
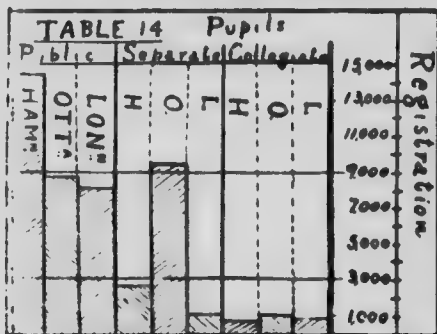
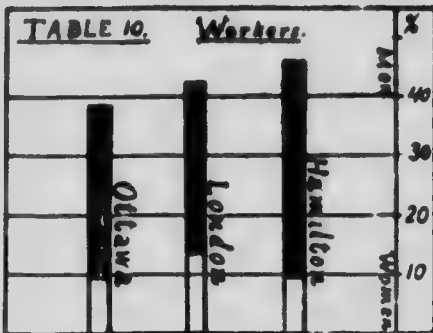
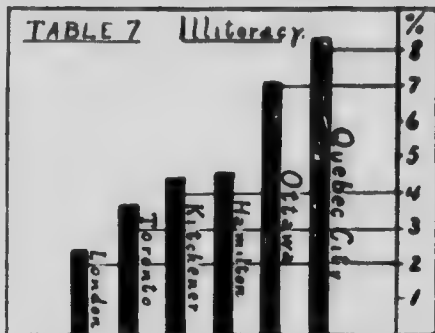
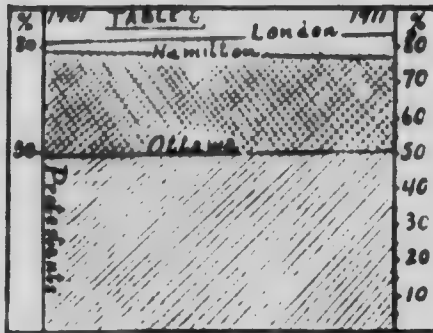
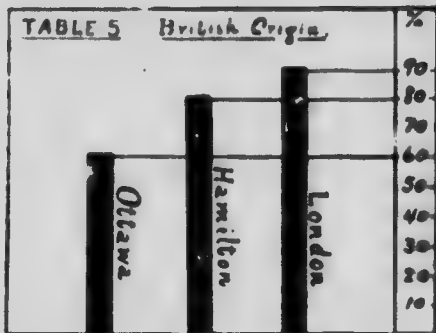
during the period of training and the earlier years of service. Normal schools have time to stress only the prescribed work; school officials are felt to be critical and exacting. Habits are easily formed and the teacher has unconsciously become a mere cog in a machine.

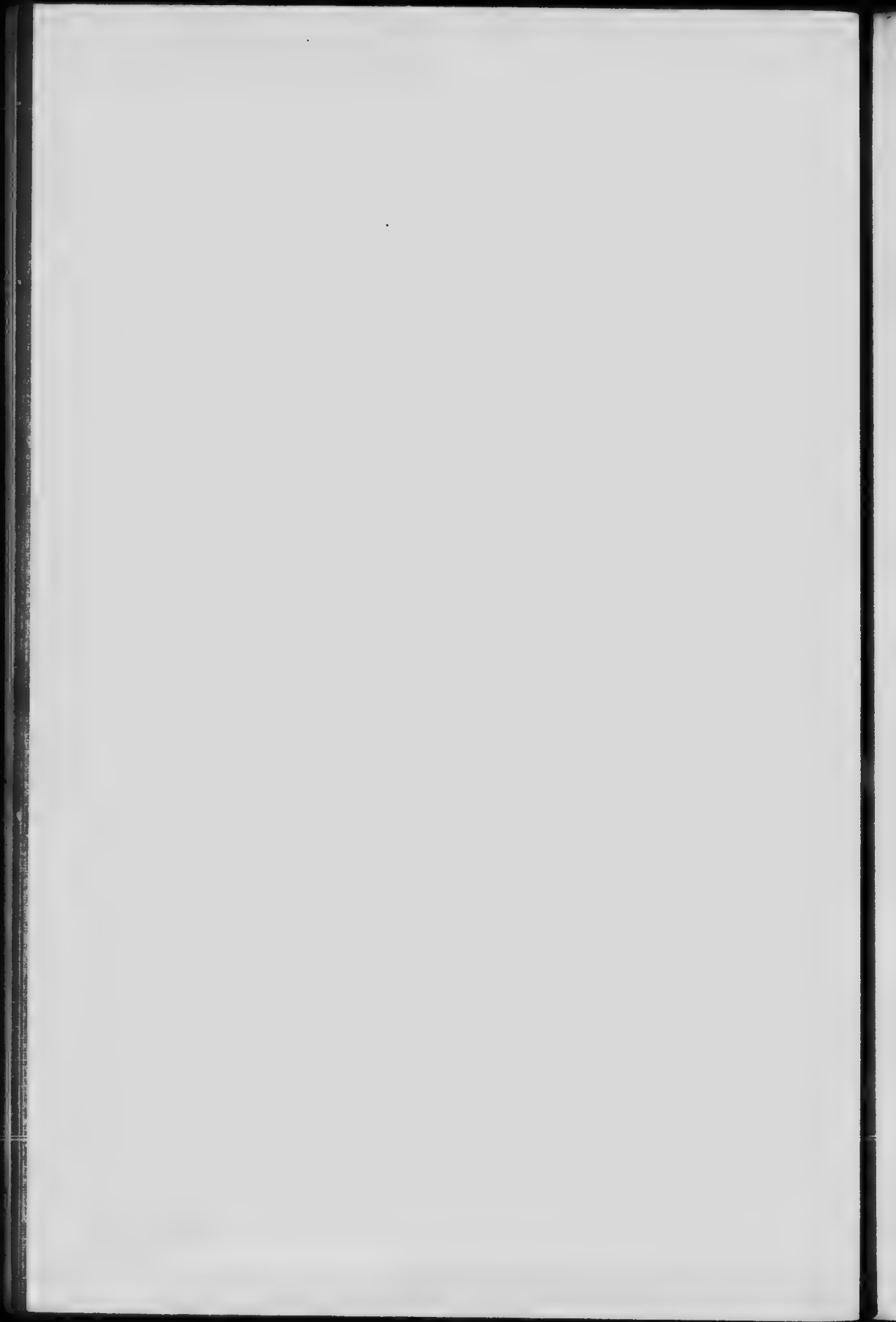
Many teachers will need merely to have their attention called to this dangerous tendency in order to guard against it. The remedy consists in a sympathetic handling of the problem by school officials so as to enlist the participation of their young apprentices in some congenial phase of community work. An organized and persistent campaign should be waged by the educational leaders of Ottawa to awaken and to utilize the spirit of civic responsibility among her teachers and to call into play their heretofore largely dormant qualities of initiative and leadership. This will constitute a very real gain in the increased confidence and respect on the part of parents and pupils, and a greater self-confidence and self-respect on the part of teachers themselves.

CHAPTER V. PUPILS

In these days when many of the traditional customs and standards of value are being placed in the melting pot, there is grave occasion for concern as to what the future may bring forth. Hopes for the safety and stability of the Canadian democracy of to-morrow must depend largely on the way in which the impressionable youth of to-day pass through this ordeal. The period of reconstruction after the war will be in the hands of pupils now in the schools and of those upon whom the responsibility for their training now rests. Probably now more than ever before is the wisdom and the need of compulsory attendance manifested and no pains should be spared to bring all within its fullest scope. For many years the school has gradually been falling heir to responsibilities formerly assumed by the home, so that it has become increasingly truer and truer that the child at school is the centre of the nation's hope.

In order that school authorities may be able to fully discharge their important duties towards each and all, some adequate method of stock-taking must be applied to the child resources of each municipality. In Ottawa the only effort at a school census is the enumeration made every year by the assessment department, classifying children between the ages of 8 and 14 years as belonging to Public or Separate School supporters. That this information is quite useless to school officials may be seen from the reports for 1917. The report of the assess-





ment department, which gathers its information between April and November of each year, shows 4489 Public School children between 8 and 14 years of age. (28:17). In February there were 5707 pupils actually enrolled in the Public Schools between the same ages. (14:1917:28).

Table 27 gives the city and Public School population from 1911 to 1917 inclusive.

Table 27. CITY AND PUBLIC SCHOOL POPULATIONS.

	1911	1912	1913	1914	1915	1916	1917
City	87,062	91,200	96,350	101,795	100,163	100,561	101,549
Public School	7,171	7,454	7,995	8,341	8,625	8,748	8,867

From these figures it becomes apparent that, in a general way, changes in the two groups are approximately parallel. Certain allowance must always be made for small variations due to Private and Separate School affiliations, or to the influx or departure of any considerable number of single adults, such as has been occasioned by the contingents sent to the war since 1914. In 1901, with a population of 59,928, Ottawa had a Public School enrolment of 4370. In 1917, when the population was 101,549, the Public School enrolment had increased to 8867. Thus for each increase of 1000 in city population, the Public School authorities may fairly expect to make added provision for a number of pupils slightly in excess of 100.

Table 28. CLASSIFICATION BY GRADES.

	1911	1912	1913	1914	1915	1916	1917
Kindergarten..	983	997	996	957	1071	1102	1108
Grade 1	1318	1501	1604	1534	1404	1340	1375
“ 2.....	929	1019	1060	1165	1162	1221	1155
“ 3.....	715	738	821	877	1052	1088	1122
“ 4.....	625	626	649	728	737	800	815
“ 5.....	631	684	812	774	811	891	987
“ 6.....	657	567	599	718	645	677	729
“ 7.....	559	574	619	714	754	719	727
“ 8.....	499	503	556	537	603	638	579
Commercial....	255	245	279	337	386	272	270

The classification of pupils by grades for the past 7 years is given in table 28. It may be seen that while 1375 pupils entered Grade 1 in 1917, only 579 reached Grade 8, and of these only 407 successfully completed it by passing the Entrance Examination. Of course these figures may not be used in a

calculation of the amount of elimination or retardation, as those who reached Grade 8 in 1917 may fairly be supposed to have entered Grade 2 in 1911. Thus it is observed that the 929 pupils have in some way dwindled to 579. But here again the 579 are drawn from a population of 101,549, whereas the 929 were supplied by a population of 87,062 in 1911. Had the population remained stationary since then, the number of Grade 8 pupils in 1917 according to the same ratio would have been 496. Moreover, there were 66 pupils promoted from Grade 5 to Grade 7 in 1915. Thus there is a decline from 863 to 496 to be accounted for. Even if it be granted as possible, though unusual, that a small balance of the exchange between Private or Separate and the Public Schools be in favour of the former; and even if the death-rate for children between 5 and 14 years of age be reckoned at the high rate of 1 per 100 each year, there will still be well over 300 of the 1911 entrants, who have either left school prematurely before completing the elementary course, or who have been retarded to the extent of one or more years. As it is not possible to follow the records of these pupils throughout the seven years, it will be illuminating to include here an extract from the report of the Senior Inspector dealing with the registration for 1917:

"In regular classes, grades one to eight, inclusive, we had a registration of 7,359 pupils in December, 1916. During the year we admitted to these grades, exclusive of transfers from other Ottawa Public Schools, 1,652 pupils. Our registration for December 1917, in these grades was 7,475 pupils. This leaves 1,536 pupils to account for who moved from the city, went to other schools, completed the school course, or, having reached the age of fourteen years, left school before completing the course. 578 moved away from the city; 259 went to the Ottawa Collegiate Institute; 128 are now attending the School for Higher English and Applied Arts at Kent Street, and 41 entered the newly established Technical School on Albert Street; 38 left to enter Business Colleges. Summing up we find that 466 children left our schools during 1917 to pursue courses of study at some higher educational institution. We may reasonably assume that at least 500, out of the 578 who moved away, will continue their education in other schools. In addition to these, 24 pupils left to attend ladies' colleges, 24 to attend the Separate Schools and 58 to attend private schools. This means that nearly 1100 out of the 1536 pupils who left our schools are actually continuing their

education, and, allowing for 19 who have died, about 400 have left to begin some calling or occupation in the world of affairs. What has become of this 400? 100, of whom nearly all are girls, are remaining at home to assist in housework; 39 are employed by the Militia Department; 44 are messengers; 73 are employed as clerks at very low salaries; 26 are remaining at home because of illness; 13 boys are employed as teamsters, 15 as machinists, 5 with plumbers, 2 with tinsmiths, 11 in factories, 7 in drug-stores, 3 in the Naval Department, 1 with the Dominion Express Company, 8 on farms, 3 in box factories, 2 in the Mint, 3 selling papers, 9 learning printing, 1 with a confectioner, 7 with the Munitions Board; 6 have enlisted; 3 are in banks; 1 is in a bake-shop, 2 in the Post Office, 1 with a carpenter, 1 with a harness-maker, 1 in a dentist's office; 1 ran away and cannot be found; 5 have been taken in charge by the Children's Aid Society; 4 girls have been employed by the Telephone Company, 13 by the American Bank Note Company, and 8 as domestic servants."

That any large number of pupils should have passed the elementary school age and have left school without having completed the course must give school officials grave cause for reflection. The Ottawa officials are quite awake to the problem as is evidenced by measures taken, to which later reference will be made. An examination of an age-grade classification as given in table 29 will reveal the extent to which pupils in the Ottawa schools were retarded in 1917, assuming that over-age is much more frequently due to repetition of one or more grades than to a late start.

The traditional view that the work laid down for the regular grades of the Public School course was designed to require 8 years for its completion, is yet quite generally accepted without question. This fact, and the additional fact that the average age at which pupils pass the Entrance Examination in Ontario is but slightly in excess of 14 years, leads to the obvious conclusion that by common consent 6 is the normal age for entering upon the work of the grades. Therefore, while compulsory attendance does not begin until 8 years of age, there seems to be considerable justification for fixing the normal age for the Kindergarten Class at between 5 and 6 years, for Grade 1, between 6 and 7, and similarly up to Grade 8, between 13 and 14.

In consideration of the fact that for table 29 the ages were taken on February 1st, and that, consequently, the pupils as

Table 29. AGE-GRADE CLASSIFICATION, FEB. 1, 1917.

Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
Kindergarten	2	187	584	309	36	3	2	...	...	...	...	...	...	...	...	...	1,123
Grade 1	...	...	36	512	512	190	57	12	5	3	...	2	...	...	...	...	1,329
" 2	...	...	...	...	21	284	501	238	116	35	10	5	1	...	...	...	1,211
" 3	...	...	...	...	...	6	233	413	276	114	48	17	5	...	...	...	1,114
" 4	...	...	...	...	...	14	173	270	202	124	46	6	...	...	...	...	799
" 5	...	...	...	...	...	3	51	191	280	221	112	21	7	2	...	...	888
" 6	...	...	...	...	...	...	2	44	165	218	162	76	15	5	...	...	687
" 7	...	...	...	...	...	...	4	7	64	208	190	148	80	15	...	...	719
" 8	...	...	...	...	...	...	...	...	17	71	180	199	121	25	3	1	608
	2	187	620	842	838	944	899	918	882	903	712	449	223	52	6	1	8,478

classified in this table might normally be 7 years and 5 months old in Grade 1, and 14 years and 5 months old in Grade 8, before promotion, the standard set cannot be regarded as unduly exacting. In justice to those who had birthdays just shortly prior to February 1st, and, at the risk of being considered over lenient as being certain to include many, much over age, the number in the column immediately to the right of that within the normal age limits has been included as making normal progress. Even with this consideration, the numbers to the right of those in heavy face denoting retarded pupils are rather startling. 30.4 per cent of the pupils are in grades lower than they should be according to their age; 3.3 per cent are 15 years of age or over; 4.6 per cent had reached the age of 14 before entering the eighth grade. Outside of mental defectives, who will not constitute more than 0.5 per cent (9:118) and certain cases of illness, this retardation is due to causes that should yield to remedial measures applied by school authorities. Even those cases of over-age due to a late start could be greatly reduced.

In the city of London, Ont., applying the same method of computation, it is found that the percentage of retarded pupils was 15.5, but there the ages were taken in September and the percentage would be much higher had the work been done in the following February. The average age for each grade, as given in table 30, shows that this problem in connection with retardation is hardly as acute as in Ottawa. In both places it would appear that more time is lost in the early grades. In Ottawa the difference in age between those in Grade 1 and those in Grade 2 is 1 year and 5 months, whereas the normal expectation would be 1 year. The 8 months' difference between Grade 4 and Grade 5 is obviously due to the opportunity given to the brighter pupils for promotion from Grade 3 to Grade 5. A similar opportunity is given for promotion from Grade 5 to 7. This apparent difference in time lost between the lower and higher grades is occasioned by the elimination of many of the "repeaters" before reaching Grade 5 or 6. Thorndyke has gathered evidence to show for various American schools that the proportion of failures is even greater in the higher grades. (10:37).

Table 31 classifies the pupils as rapid, normal, or slow, showing percentages for each grade.

Ottawa officials have grappled with this problem of non-promotion and that they are meeting with at least some small degree of success is shown by the consistent decrease in the percentages of retardation given in table 32.

Table 30

....AVERAGE AGE, FEB. 1, 1917

	Kind'n.	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade
	1	2	3	4	5	6	7	8	
	Y. M.	Y.M.	Y.M.	Y.M.	Y.M	Y.M	Y.M	Y.M	Y.M
Ottawa	5-8	7-4	8-9	9-11	11-1	11-9	12-8	13-5	14-2
London	5-10	7-2	8-5	9-6	10-5	11-3	12-6	13-1	14-0

Table 31.

Percentage of Rapid, Normal and Slow Pupils, 1917.

	Rapid.	Normal.	Slow
Kindergarten	16.8	79.6	3.6
Grade 1	2.7	77.1	20.2
" 2	1.7	64.9	33.4
" 3	0.5	58.0	41.5
" 4	1.8	50.3	47.9
" 5	6.1	53.0	40.9
" 6	6.7	55.7	37.6
" 7	10.4	55.4	34.2
" 8	14.5	60.8	24.7

Table 32.

Percentage of Retardation, 1913-1917.

Year	1913	1914	1915	1916	1917
Percentage	33.5	32.3	32.03	31.94	30.4

Graphical representation of the extent to which retardation has been reduced in the various grades is given in Figure 2. A glance at this chart indicates that the improvement is along right lines inasmuch as while there seems to be more retardation in the upper grades in 1917, this is an indication that retarded pupils are being retained at school longer than formerly. The curves also show a satisfactory decrease in the earlier grades. (14:1913:31 and 1917:28).

Their efforts have been directed along several lines. (1) Since 1913 more careful attention has been paid to the health of pupils, the appointment of school nurses at that time making it possible to regularly inspect teeth, throat and general condition of every child in the schools. The result of this should be to

improve the character of work done as well as to make more regular attendance possible, thus enabling more pupils to progress at the normal rate. (2) Provision is made for the dismissal of pupils, whose work has been satisfactory, at 3.30 or shortly after. An extra half hour is spent with the more inattentive or backward pupils to clear up difficulties and to enable them to keep pace with the rest of the class. This arrangement is based upon the recognition of the fact that pupils are not all equally endowed and have not the same interests or powers of application. It frequently happens, too, that, on account of absence, this half hour provides the first opportunity to explain some important principle that has been missed. (3) Another plan has been adopted to meet the needs of pupils, with whom the problem is not so much an inequality of ability as a striking difference in type of mind. Some pupils learn from books with considerable facility. Others are more concrete-minded and can grasp a truth readily only when presented through the concrete example. Motor activities and various conscious processes so act and react that the former are found to have a quickening influence upon the latter. Accordingly, a school called the Manual Arts School, which provides for a maximum amount of handwork, for both boys and girls, in conjunction with the regular work of the grades, was opened as an experiment in 1913. It also provides a way out of the difficulty of attempting to fit adolescents into conditions primarily designed for younger children. An age range of more than 3 years in the same grade is found to militate against the best work. (15:141). This school can accommodate only 140. It has already proved its usefulness and great need is felt for a much wider extension of the plan. It has been demonstrated that the pupils sent here can do the ordinary work of the grades with considerable credit in addition to spending half-time on Manual Training or Domestic Science. New avenues have been opened up to the awakening of interests and new channels for expression provided. (4) Many pupils have little or no expectation of taking a High School course and especially is this beyond the reach of some where high fees are exacted as in Ottawa. (13:1917:209). With no prospect of continuing studies further, there is not the same incentive to complete the course in the elementary classes. By providing free instruction of an exceptionally high character, for courses varying from 1 to 3 years in length, in the School of Higher English and Applied Arts, the Ottawa Public School Board has made another commendable effort to arouse the ambition, to sustain the interest, and to increase the efforts of many who would otherwise have quit school much earlier. The enrolment of 270 here

in 1917 represents a decrease of 116 since 1915. This falling off is due to two causes, the opening of the Technical High School for day classes, and the stress of economic conditions requiring the wages of some of these young people at home. The number taking up employment of some kind has been greatly increased by the attractive wages that are offered by various war industries.

This same influence has been at work throughout the province, generally among the older pupils in higher grade classes, and has affected not only the problem of elimination but that of regularity of attendance as well (13:1917:6). Regular attendance has much to do with the likelihood of earning a promotion. Absences amounting to 10 per cent or less are known to have resulted in repetition of a grade (10:43). A decrease of 2 per cent, from 66.6 to 64.6 in the average attendance has been registered for the province in 1917 (13:1917:7). The average for the cities of Ontario was 71.8 per cent. Ottawa's record has remained almost stationary for 10 years, at approximately 84 per cent of the total attendance. If the calculations for regular grade classes and Kindergarten classes be made separately, and the percentage of average attendance be computed from the average registration, the result may be seen in table 33. 4634 absences were referred to the truant officer for investigation and the discovery of 317 cases of truancy resulted. It has already been suggested that a lack of punctuality on the part of the teacher would materially weaken her influence with her class in this respect. It is not surprising, therefore, to find that the amount of lateness among pupils approximates that among teachers. A record of 13,538 lates gives an average of slightly less than two times per pupil for 1917.

Table 33.

Average Attendance, 1907—1917

	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917
Regular Grades	88.0	88.5	88.7	87.0	87.1	88.9	87.3	86.3	87.3	87.8	88.3
Kindergartens....	74.2	72.4	74.0	72.4	70.9	73.8	71.7	66.9	69.6	65.8	68.7

Forty-seven pupils or approximately .5 per cent of the enrolment of the Ottawa Public Schools are to be found in special classes conducted for the mentally defective. In the selection of these pupils careful consideration is given to the report of the regular teacher and the school nurse. Teachers with special

training and special natural aptitude for this kind of work are put in charge. A minimum of reading, spelling, composition, writing, and number work and a maximum of music, games, and manual work constitute their daily programme. By arranging for different times of dismissal and intermission, an attempt is made to segregate these children from the normal pupils in the other classes. It is not expected that these pupils will ever attain a degree of proficiency in the ordinary school subjects beyond that of a normal child of eight. Neither is it expected that they will ever become so industrially efficient as to be able to dispense with the need of careful supervision. While the defective child elicits sympathy and is entitled to the best that the Public Schools can provide with any reasonable chance of effecting a development, yet the chief responsibility in connection with it must be assumed by the community after school days are over.

RECOMMENDATIONS.

1. In order that all of the children of all the people may derive the maximum benefit from the Public Schools, it is necessary that the schools be used to the greatest possible extent. To this end much can be contributed by the tactful treatment of the pupil by the teacher and by a campaign among the parents, setting forth the personal advantages, material and moral, that accrue from regular attendance. The general legislative grant is apportioned to cities according to attendance. The habit of keeping one's engagements with teachers and all others, regularly and without fail, is of the utmost moral importance. But there is always a certain minority who do not respond to a moral appeal and who must be reached by other means. The existing machinery is wholly inadequate to obtain the desired results. The officials ultimately responsible for the attendance should, while vested with police authority, be more intimately connected with the school authorities than at present. To them should be entrusted the making of a thorough census of all young people from 3 to 21 years of age. This census should be maintained with necessary revisions and additions from year to year. All these people should be catalogued according to age, grade and school. A thorough system of co-operation between school principals and attendance officers would keep the records correct in case of transfers or removals. It could be arranged that postmen and others report all cases of new arrivals. Such a census could be utilized as a basis for estimating accommodation needed for the succeeding year. The inclusion of pupils from 14 to 17 years of age would prove valuable on the occasion of the

enforcement of the Adolescent School Attendance Act. The economical and efficient carrying out of this recommendation presupposes the realization of suggestion I. in Chapter II.

2. In addition to the 400 pupils previously mentioned who have left the Public Schools in 1917 to take up some sort of work, there would be a similar number or more from the Separate Schools. Many of these are entering what are termed "blind alley" occupations from which there is small prospect of emerging into a state of economic independence. The years from 14 to 16 are of such vital importance to young people in the formation of character that it may be regarded as criminal negligence to allow any boy or girl at this critical period to have any considerable amount of undirected leisure time or to enter an occupation which offers no food for healthy ambition. The application of the Adolescent School Attendance Act requiring these 800 young people to spend at least half time at school during the next three years would prevent some from becoming a drag on society and would enable all to maintain a higher standard of living. It is believed that, given a clear understanding of its practical working and its aims, the general public in Ottawa would heartily support such a measure. Present indications are that, if local authorities do not take action along these lines, the central educational authorities will make it obligatory upon all up to sixteen years of age at least. (Globe Editorial, July 31, 1918.)

3. Another recommendation is made on the assumption that a Board of Education has been created and that the necessary permission has been obtained from the Department of Education. A marked tendency has already been noted for pupils to leave school before completing the ordinary Public School course and it is also a fact that many are too old when entering the High School. It is equally true that many leave at or before the end of the first year here. The early leaving could be prevented by the enforcement of the Adolescent School Attendance Act but the cause, which lies deeper, would still be untouched. There is obviously a need for a re-organization of the course, affording an earlier adaptation to the changing interests and stages of development of the pupils. The failure to "reach" pupils in these respects gives rise to much waste in time, efficiency, culture and character-building. This is a moral question much more than a mere economic one. The desultory response given by the disinterested pupil can never give rise to that proper moral attitude towards ideals of service or to those habits of

application and carefulness so essential to faithful, efficient citizenship. The remedy consists in providing a course which will employ the practical interests of these pupils in such a way as to create a desire on their part for further instruction. The Junior High School, such as has been already introduced into many cities of the United States, proceeds along these very lines. At 12 years of age three courses normally open to the child, an academic course for those proceeding to professional or purely cultural studies, a commercial, and an industrial course. Thus at adolescence the pupil finds himself launched in the middle of a course of his choice which he would not willingly leave. This obviates the present inviting break between the Public and the High School courses at this critical time. It would admit of an earlier start at foreign language study, for which there is much psychological justification. (3:133 and 35:41). The plan already initiated in Ottawa for the school year of 1918-1919 of classifying the pupils into seven grades is a beginning quite in keeping with this suggestion, as it recognizes the need of shortening the time for the elementary course. While the extension of the Technical High School is under consideration, and before definite steps are taken in connection with the building of another academic High School, the merits and practicability of the Junior High School for Ottawa should be fully investigated.

4. Reference has already been made to the very satisfactory character of the work done at the Manual Arts School. These classes are being continued at different centres since the leasing of the Waller Street building to the Dominion Government. The idea of making them more easily accessible to all parts of the city is a good one. The percentage of retardation, that still obtains, suggests that there is room for more classes doing this kind of work. From 10 to 12 such classes could profitably be used to serve largely as feeders to the Industrial Junior High School or the present Technical High School. Any such steps taken, tending to reduce elimination or retardation of pupils, are important, not so much from the standpoint of reducing costs, although each "repeater" costs the Board \$55.92 per annum, but because the consequent loss of self-confidence and self-respect and the early acquisition of the habit of failure tend to produce an inefficient class of citizens.

5. Much effort is already being expended on behalf of the mentally defective child. The benefits derived from this training would seem to be in some considerable measure nullified, if these pupils, still in sore need of supervision, are to be turned loose, a probable burden and menace to society. Co-operation

between the school and the other proper authorities should result in seeing that these pupils leave school when the time comes, to enter an institution that will utilize and continue the training given by the school. The prime purpose of such an institution should be to provide supervision and direction for their economic and social functions.

6. Reference to table 29 will elicit the fact that 6.2 per cent of the pupils in the Ottawa Public Schools are accelerated from 1 to 3 years. Provision is made for the brighter pupils to make more rapid progress by skipping an occasional grade. Other than this, little has been done for the super-normal child. While it is recognized that the Public Schools are designed to serve the masses, and not to produce genius, yet the benefit to the community and the state that should accrue by allowing for the more rapid development of the brighter pupils, should receive serious consideration from the School Board. Provision of ungraded classes for exceptionally bright children, placed under the most capable teacher available, limited to 25 pupils, would allow for more rapid progress. The increased annual cost of the smaller classes would be balanced by the shorter term of years, which these pupils would spend in the elementary school.

CHAPTER VI.

INSPECTORS AND OTHER OFFICIALS

It is in the nature of things that the physical plant shall impose certain limitations upon the possibilities before any school system. The spirit of the teacher supplies the dynamic that makes the system a living force. The pupil is, without question, the *raison d'être* of all other school factors. But upon the officials, who are vested with authority and who determine the outlook for all the others, must rest final responsibility for success or failure. It is for them to provide means; it is for them to inspire and encourage teachers and to refuse to tolerate incompetency; it is for them to adjust all programmes to the particular needs of pupils and to determine the ideals of character and citizenship that are to be placed before them.

Local school organizations throughout Ontario may be regarded, ideally, as basing all actions upon sound educational principles and as projecting the ideal, the best interests of the child, the community, and the state. Actually, they must carry out the will of the ratepayers in accordance with departmental

regulations. Within these limits or, in some cases, beyond them, there is room for a certain amount of freedom.

The Public School Board of Ottawa consists of eighteen members elected for a two-year term, half of whom retire each year. Thus a certain continuity of policy is assured. That the members are willing to serve the community at the expense of a considerable sacrifice of time is evidenced by the fact that there were, in 1917, 14 meetings of the Board and 4 committee meetings, nearly all members of the Board serving on two of the four standing committees. In addition to this, 363 visits were made by trustees to the various schools, an average of more than 20 visits for each member.

Each of the four committees, Finance, Management, Building, and Furnishing, prescribes the duties of a particular official who, however, may on occasion receive instructions from any committee. These officials are, respectively the Treasurer, the Senior Inspector, the Superintendent of Buildings, and the Clerk of Supplies. According to the Rules and Regulations of the Board these four chief officers are absolute co-ordinate in authority.

One of the most important duties of the Board is the appointment of these officials. It should select men in whom it can repose absolute confidence and should then so treat them that their personalities and powers of initiative may assert themselves. There is nothing quite so deadening in its effects as an arbitrary inflexible rule, and a school system, where so much depends upon spontaneity and personal influence, is most sensitive to such a condition.

The appointment of an Inspector raises the question as to what principle shall obtain in his selection. The Board may appoint an outsider, or it may promote one of its own principals with the necessary specified qualifications. The latter procedure has much to commend it from the standpoint of recognizing superior service. It is exposed to the danger of "inbreeding", where the home-bred man may lack in proper perspective and may not be "able to see the woods for the trees". The wise course and one which many progressive cities pursue, is to place the chief authority in the hands of a recognized expert, a man whose training and experience has familiarized him with the best systems and has rendered him free from the traditions, conventions, and customs prevailing in his new field. (12:1917:8:15). The right man being secured to formulate and direct the larger

educational policies, his assistants may very well be local appointees to attend to matters of a more routine character. The Ottawa Board has appointed the two present incumbents from the local Normal School staff, both of whom had had successful experience in outside places.

The relation of the Management Committee to the Senior Inspector is, both constitutionally and in actual work, quite in accordance with the best practice in several important respects. For example, his recommendations with regard to appointment, transfer, or dismissal of teachers are invariably acted upon by the Committee. (Some qualification of the preceding statement may be necessitated by events subsequent to its writing.) In fact, it is not uncommon for the Committee to give formal sanction to the Inspector's acts by a sort of blanket recommendation, as, for example:

"That all other recently engaged teachers in the employ of the Board be assigned to duty by the Senior Inspector where their services are required."

It is not surprising that a Committee that could go thus far could go farther and recommend:

"That Miss..... resume her work in School and take charge of whatever class may be assigned her by the principal".

In matters of greatest moment to the Board involving a possible radical re-organization of the schools, quite revolutionary in character, they have shown themselves quite alive to the value of expert opinion. Pending a decision as to a building programme to provide increased accommodation, the Board asked its Inspector to investigate and report on the school plan in Gary, Indiana. On receipt of an adverse report, plans were resumed for the continuance of the traditional system. Why employ an expert if his judgment cannot be relied upon? The Inspector is also given full responsibility for details of class-room procedure and government. When he cannot be entrusted with these powers, it is time to make arrangements for a successor.

The Senior Inspector, with the weight of important administrative duties upon him, has very properly been relieved of much of the class-room inspection. In 1917 he made 122 visits to schools while the Junior Inspector made 276 visits. It is not the number of inspections, however, which is of greatest importance, but the attitude of inspector to teacher. Are his visits welcomed

or dreaded ? Does he leave behind him a feeling of encouragement or of failure, inspiration or resentment ? Does he allow for individuality and initiative on the part of the teacher, or are his demands so rigid and exacting that the teacher's self is cramped and repressed ?

Inspection in Ottawa may best be characterized by the word "thorough". A time allotment for each subject is suggested from the Inspector's office, the suggestion being generally regarded as mandatory. Each teacher's time-table passes through the office for approval and a copy is kept on file. Then, last year in geography, for example, each teacher was required to send in a detailed outline of lessons for the year with the date for each. Thus it is possible to know beforehand just what teacher A in school B will be taking up in his geography period on any particular day. This is an excellent plan for ensuring a preview of the whole field by the teacher, but it reminds one, somewhat, of the centralized system of France in Napoleon's time, lacking, however, the centrally prescribed lesson topics. In another subject, composition, pupils were expected to have a certain minimum amount written in their special composition books during each lesson, again reminding one of the importance attached to entries in science note-books by certain High School Inspectors some years ago. To apply such a method consistently to all subjects would tend to reduce the teacher to more of an automaton. It strengthens the impression of being under constant inspection. The following regulation of the Board serves a similar purpose:

"Each teacher shall keep in a blank book, provided for that purpose, a daily record of lessons and homework set by said teacher. The record made by the teacher shall be full enough to show the nature and amount of the work covered in class or of the homework assigned. Such book shall at all times be open for inspection." (24:56).

A most helpful practice is carried out by the inspectors, in holding grade meetings for the purpose of discussing methods of presentation and class-room procedure. Free expression of opinion is invited and to illustrate certain views demonstration lessons are sometimes given. This plan of working *with* the teacher has much to commend it in preference to arbitrarily prescribed methods.

Another step was taken in 1913 which illustrates a very sane attitude of an inspector towards the teacher. It betokens

a confidence in the ability of his teachers and places them in a position commanding more respect from pupils and parents. Reference is made to the abolition of the uniform system of promotion examinations set from the Inspector's office. Promotion based on the judgment of the principal and his teachers was substituted. The work through the year becomes of more importance than a final test. The teaching of the pupil takes priority to the teaching of the subject of study.

In addition to the general supervision given to all work by the inspectors, provision is made for a vertical supervision of certain subjects by the appointment of special supervisors for Art and Writing, Music, Physical Training, Domestic Science, and Manual Training. The clauses from the Rules and Regulations of the Board show their place in the general organization :

- "1. In the general discharge of their duties supervisors shall conform to the directions of the Senior Inspector, but when visiting a school, and in the immediate absence of the Senior Inspector, they shall conform to the directions of the principal of that school.
- "2. When a supervisor visits a class, he may teach the class and in that way show the regular teacher how he wishes to have the work done, or he may ask the regular teacher to take the class in order that he may observe how his instructions are being carried out."

The instructions referred to are given to teachers at monthly grade meetings where the supervisors outline the work to be covered by the pupils for the succeeding month, and give such instructions in principles as seem to be necessary according to the proficiency of the teachers. Two plans are followed in arranging for the class-room visits of supervisors. For example, the Supervisor of Music follows a fixed schedule, averaging a visit to each room every three weeks; the Supervisor of Art and Writing follows a more irregular itinerary, spending more time where help seems to be most needed. That much help is still needed, and probably will be, with a changing staff of teachers, is recognized as shown by extracts from various annual reports:

1913. "Unfortunately, there is a great lack of uniformity in our schools. Some schools do remarkably good work (in Music) while others do very little."
1914. "Several classes have been added to the list of those in which correct position, penholding, and move-

ment are insisted upon in all written class exercises."

1916. "The supervisors of these different subjects have gradually induced teachers to try teaching them until now, almost without exception, every teacher is teaching all the subjects on the curriculum for her grade."

The Board has secured capable officers as Clerk of Supplies and Superintendent of Buildings. For the former, one of the successful principals was selected, thus securing the services of one who was thoroughly familiar with the condition and requirements of the schools. The latter official is a practical architect who has made a special study of schools and equipment.

Twenty-two janitors are employed at an average salary of \$1108 per annum. While these have their duties specifically assigned by the Board in its Rules and Regulations and while under the general direction of the Superintendent of Buildings, they are also "to be ready at all times to respond to any call for their attendance at the buildings and to execute with promptness and intelligence the orders of the principal."

The Public School Board employs four nurses, with a salary schedule parallel to that for female teachers with permanent second-class certificates. Subject to the general instructions of the Senior Inspector, "while visiting a school the nurse shall be under the authority of the principal." Through the nurses' conferences with parents, visitation of homes, and the following up of cases where treatment has been advised, the school comes into more intimate and sympathetic touch with the home than at any other point.

RECOMMENDATIONS.

1. It would seem in some instances that the Board reserves to itself certain authority that might very well be handed over to its officials. The fact that some small matters, carried out by these, must needs come up for ratification by the Board, makes an unnecessary call upon its time and implies a certain distrust of the competency of its officials. The time of the Board meeting could be spent to better advantage upon matters of greater moment. A question concerning the use of the school for a school entertainment could surely be entrusted to a competent principal. The granting or refusing permission to an out-

sider to visit and inspect the schools, or permission for a collection to be taken among the pupils for Red Cross purposes, and all such matters could be dealt with by the Senior Inspector in accordance with certain general principles laid down without reference of each particular instance to the Board.

2. So far as appears from the duties prescribed by the Board for the four chief executive officers, they are entirely co-ordinate in authority. Since their work may not be carried on in separate water-tight compartments but must necessarily touch and overlap at frequent points, it would seem rational to have an executive head. The Senior Inspector should be empowered to give instructions and to direct their work when deemed necessary in accordance with his educational policies. (12:1917:8:22).

3. In accordance with the foregoing recommendations the powers of the Senior Inspector should be enlarged, giving him practically a free hand in educational matters so long as he retains the confidence of the Board. No board of laymen would presume to prescribe a policy or to arrange details for a recognized expert whom they had engaged for just this purpose of giving scientific direction to school affairs.

4. Without suggesting more inspection, the appointment of a third inspector is recommended. The movement to blend the Kindergarten spirit with the content of the Primary grade requires skilful and sympathetic guidance. A woman inspector, to take charge horizontally of all work in Kindergartens and grades 1 and 2, would be able to devote attention to work in the early stages to an extent that is not now possible. A good beginning during the first year in habits and in attitude is more important than some later stages which have often received more stress. Successful work here is most difficult, requiring special temperamental qualities and special understanding of the child mind. Also, since nearly 80 per cent of the teachers are women, a woman inspector, who could enter into their viewpoint, understand their problems, and look after their interests, would be only a fair concession as well as a profitable addition in the interests of school efficiency.

5. The appointment of additional supervisors as soon as possible, to assume direction of certain other subjects of study that are not at present accomplishing all that should be expected of them, is strongly urged. The first subject recommended

to receive such help is geography. (See Chapter VII.) In the event of all schools coming under one Board, a feasible method of providing for such supervision would be to make careful choice of a suitable man as head of the department of geography in the Collegiate Institute. This man could be given supervisory charge of the subject throughout the Junior High School and the grades of the Public School. Similar provision should be made for History. The persons for such positions should be experts whose training and experience has qualified them to understand elementary as well as secondary school needs.

6. All teachers are required to attend the grade meetings held monthly by the Supervisor of Art and Writing. To teachers and principals who have attended these meetings for many years, they must become profitless and irksome. Teachers should be given a chance to graduate from such requirements. To all such, a bulletin could give intimation of changes from time to time.

7. The Supervisor of Physical Training should be more than a mere drill instructor. He should be given charge of all gymnastics, play activities, and organized games throughout the schools. He should be in intimate touch with the work of the Playgrounds Association. His department should be closely associated with the work of nurses when pupils are being charted as to measurements, weight, and other physical characteristics. This is essential to the proper choice and direction of suitable exercises. These matters should not be left to haphazard methods but should be governed by intelligent principles.

8. The policy already inaugurated of appointing assistants to relieve principals of certain clerical and teaching duties should be extended. While principals should retain some connection with actual teaching, they should be freed sufficiently to be able to attend to their administrative duties, to become familiar with the character of work done by each of their teachers, and to meet parents. Such assistants should not be liable to be withdrawn for supply work thus leaving the principal's programme subject to constant uncertainty and frequent interruptions.

9. Every person who has to do with the schools should be an educationist first of all. A school janitor requires qualifications differing from those of a caretaker of a warehouse. Janitors should possess an understanding of, and a liking for children. They should have an intelligent appreciation of the needs and aims of the school. To promote such an understanding, a class

for janitors should be regularly conducted, corresponding to grade meetings for teachers (15:251).

10. The direction of school affairs should be in the hands of men with open minds, ready to learn and to appropriate to their own use ideas from all sources. It is a wise management that is willing to profit by the experience of others. The fullest use should be made of the findings of educational experts the world over. A thoroughly alert and progressive management will go further and will carry on experiments on its own account. One of the schools, with teachers best adapted to this type of work, should be set apart for the purpose of trying out ideas approved by the Senior Inspector.

CHAPTER VII.

SOME SUBJECTS OF STUDY.

One of the most important means by which the city's educational aims are to be realized remains to be examined—the curriculum. The purpose of education has been variously stated as: “preparation for complete living”; “to train pupils to become efficient members of society” (23:36); “to bring one's nature to full maturity as represented by the best of the adult community in which one grows up” (2:16); or, in the words of the Senior Inspector: “to give the pupils a favourable environment for growing”; or, again, “the formation of good habits, cleanliness of body, purity of speech, an easy and graceful manner, courtesy, industry, consideration of the rights of others, initiative, resourcefulness, increased ability to do things, a love of truth for its own sake” (14:1913:11). While these may be open to the criticism of being either incomplete or too vague and indefinite, any attempt at a brief statement would almost certainly have the same defects. Each of the above definitions would seem to require that education shall contribute to the fullest development of the head, the hand, and the heart, and that it shall aim to equip one for his vocational, social, civic, leisure, and health needs and responsibilities. The success of any system of education may be judged by the adequacy of its aims and the fulness with which these aims are realized. The right of a subject to a place on the curriculum may be determined by the extent of its contribution to these ends.

Since the Department of Education prescribes the course of study in very great detail for every Public School in the pro-

vince, it is quite outside the scope of this work to make any radical suggestions with regard to its content. It will be the chief concern of this chapter to examine certain subjects of study which lend themselves most readily to examination, and to form some conclusion as to how these subjects as used in Ottawa succeed in realizing the possibilities inherent in them. Of course a curriculum is not a static but a progressive, growing entity. The curriculum of yesterday would not satisfy us to-day and that of to-day will not meet the needs of to-morrow. We are probably even now on the verge of another readjustment to meet the changing needs of to-day. It is also true that a curriculum suited to one part of the province is not necessarily the best for another part where race, social, economic, or industrial conditions are widely different. A course of study suited for one section of a city may not meet the needs of other sections of the same city. Until local units have given evidence of competent educational leadership these matters must be directed from a central office. It may be that in the near future certain of the larger cities will have gained such recognition and will be extended a measure of autonomy in adapting their courses of study to their particular problems. As already intimated, the creation of a Federal District would bring this freedom to Ottawa.

The percentage of time devoted by Ottawa Public Schools to each subject in each grade is given in table 34 and is compared with the standard suggested by the Departmental Manual and also with that representing the average of 50 progressive American cities (2:21ff).

It has not been possible to carry out tests in all the subjects, nor to reach all pupils, nor even every school. Tests were, however, submitted in Spelling, Writing, Reading, and Arithmetic on a limited scale. Grades 4, 6, and 8 were selected as being sufficient to afford a comparison with the standards used and to denote tendencies towards growth. But two schools were used. These differed widely in various conditions and should give a fair average for the city. The tests were given in early September but as the standard scores used were calculated in June, pupils were graded as though no promotions had been made prior to the summer vacation. For example, scores recorded for grade 4 were made by pupils found in grade 5 at the re-opening of the schools. The grade 8 pupils of June were followed into the School for Higher English and, as these are drawn from all the Public Schools, the records should be fairly representative.

Table 34. Percentage of Time in Each Subject by Grades.

Grade	I			II			III			IV		
	O.	D.E.	A.C.	O.	D.E.	A.C.	O.	D.E.	A.C.	O.	D.E.	A.C.
Reading		18.3			14.6			11.6			11.6	
Literature	19.2	5	31	19.2	6	26	17.7	7.3	21	17.7	7.6	
Arithmetic	14.7	10.4	6.9	14.7	10	10.7	17.7	10	14.4	17.7	10	
Spelling	11.1	5.8	6.3	11.1	5.3	7.3	9.6	6	8	9.6	7.3	
Writing	5.5	5.8	6.7	5.5	4.6	6.7	5.5	5	5.7	5.5	6	
Grammar	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Composition	10.4	7.5	8.6	10.4	7.3	8.7	11.1	7.3	10.3	11.1	7.6	
Geography	2.2	3.7	1.8	2.2	4.3	.8	3	5.3	5.4	3	6.6	
History	2.2	1.6	3.1	2.2	2	3.4	3	4	3.8	3	4	
Nature Study	4.4	7	.....	4.4	6.6	.....	4.4	7.6	.....	4.4	7.6	
Hygiene	3	4.2	4.3	3	3.3	4.5	3	4	4.4	3	4	
Phys'l Ex's	5.5	7.5	5.4	5.5	6	4.5	5.5	6	4.5	5.5	4	
Drawing	4	5.1	11.3	4	4.7	6	4	5.3	6.2	4	5.3	
Singing	5.5	6.3	5.2	5.5	5	5.3	5.5	5	5.1	5.5	5	
Manual Work	4	5	4.8	4	5	5.1	4	6	4.5	4	6	

O —Ottawa.

D.E. —Department of Education.

A.C. —American Cities.

A.C.	V			VI			VII			VIII		
	O.	D.E.	A.C.	O.	D.E.	A.C.	O.	D.E.	A.C.	O.	D.E.	A.C.
		10			10			10			10	
16	16.8	8.6	13	16.8	8.6	12	15	5.6	10	15	5.6	10
15.4	16.8	10.1	14.9	16.8	11.6	15	20	11.6	14.4	20	11.6	14.1
6.9	7	6.6	6.3	7	6.6	5.9	5.2	6	5.3	5.2	4.3	5.1
5.5	5.2	5	5.1	5.2	5	4.8	5.2	5	3.9	5.2	5	3.7
.....	.....	.....	.....	.....	.....	.....	6.3	5.3	.....	6.3	6.6	.....
10.9	10.5	8.6	12	10.5	8.6	12.2	6.3	5.6	13.7	6.3	6.5	14.1
8.5	4.2	6.6	11.2	4.2	6.6	11	4.2	6	9.9	4.2	6	7.6
5.8	4.2	6	6.9	4.2	6	7.3	4.2	6	9.2	4.2	6	11.6
...	4.2	7.6	.....	4.2	6.6	.....	4.2	6.6	.....	4.2	6.6	.....
3.8	2.8	4	3.5	2.8	4	4.2	2.8	4	4.5	2.8	4	5.7
4.2	5.2	4	4	5.2	4	4.2	4.2	3.3	3.7	4.2	3.3	4
5.5	4.2	5.3	5.2	4.2	5.3	5.1	4.2	3.3	5	4.2	5.3	4.9
4.9	5.2	5	4.7	5.2	5	4.6	4.2	3.3	4.4	4.2	3.3	4.4
4.6	10	6	5.2	10	6	5.8	10	.....	7.1	10	8	7.4

SPELLING.

The aim of teaching Spelling as set forth in the provincial syllabus of the courses of study, is "to train the pupil to use the forms of words approved by custom in the mechanism of his written composition." In the endeavour to realize this aim the Ottawa Public Schools spend more than 8 per cent of their time and approximately \$30,000 per year. The Department of Education recommends slightly less than 6 per cent of the school time, and the 50 American cities average almost 6.4 per cent.

There would seem to be no good reason why a higher standard should be set for Spelling than for any other instrumental subject. So long as pupils can spell their writing vocabulary sufficiently well not to interfere with the free and easy conveyance of thought, it is questionable whether any additional expenditure of time is justifiable at least while other subjects are in pressing need of more attention. Greater proficiency belongs to the field of specialized or vocational training. The ability to spell well consists not in having memorized a long list of words but in having formed careful habits of spelling correctly all words committed to writing, turning to some recognized authority in cases of doubt. The formation of such habits has been greatly facilitated by supplying dictionaries to each pupil in grades 7 and 8. It remains but to encourage their proper use.

The words used in the Spelling test were taken from Ayres' List. The results obtained are shown in tables 35 and 36.

Table 35. Spelling. Average Scores.

Grade	4	6	8
Ottawa Schools	74	80	89
Standard Scores	73	73	73

Table 36. Spelling. Percentage Frequencies.

Grade 4	Number of Pupils		Percentage Value of Paper
	Grade 6	Grade 8	
1	0	0	10
2	0	0	30
2	3	0	40
5	1	0	50
5	6	1	60
11	17	1	70
17	16	4	80
12	38	13	90
7	5	7	100

The median scores are 77.94, 85 and 90.38 respectively for the grades as used in table 35. The average deviation for the three grades in the same order is 15, 10.7 and 4.15.

All three grades obtained relatively high results in Spelling, with a steady increase in uniformity as well as efficiency.

WRITING.

Writing is to be taught "to train the pupil to record his thoughts and feelings rapidly and legibly." (23:26). Like Spelling it is a tool subject and effort should be made early in the school life to form correct habits and to render it as automatic as possible. Here again the Public School ought not to spend time to acquire more than a reasonable degree of legibility or speed. More than this belongs to the field of specialized work and ought not to be undertaken at public expense. The Supervisor of this subject describes the art of Writing as "a mechanical knack or habit," consisting of correct position of body, penholding, and forearm movement, to be acquired by practice in all written exercises. He might have included certain habits of spacing and slant as contributory to legibility and speed and also have allowed for certain wrist and finger coordinations which give individuality to hand-writing. (3:331). Perfect uniformity is not desirable. Good results have been obtained, in the Ottawa Public Schools, in freedom of movement by means of a series of exercises devised by the Supervisor who personally attends to the promotion of each individual pupil from one exercise to the next when the required proficiency is attained. This is but the application to Writing of a principle that would be of great benefit to work in any subject if conditions permitted its use. It is a departure from the lock-step progress allowing each pupil to proceed according to his ability.

The tests in Writing were carried out in accordance with instructions for the use of Ayres' scale (1:61-82). The results are shown in tables 37 and 38.

The medians for speed, calculated from the actual individual scores are respectively 36.18, 68, and 72. The median scores for quality are 37, 44.64, and 65. The average deviation for speed is 10.56, 10.9, and 13.77, and variations for quality scores are respectively 3.53, 4.48, and 9.31.

Table 37. Writing, Average Scores.

Grade	4	5	8
Standard Speed	47	65	83
Ottawa "	42	68	69
Standard Quality	37	53	63
Ottawa "	37	45	61

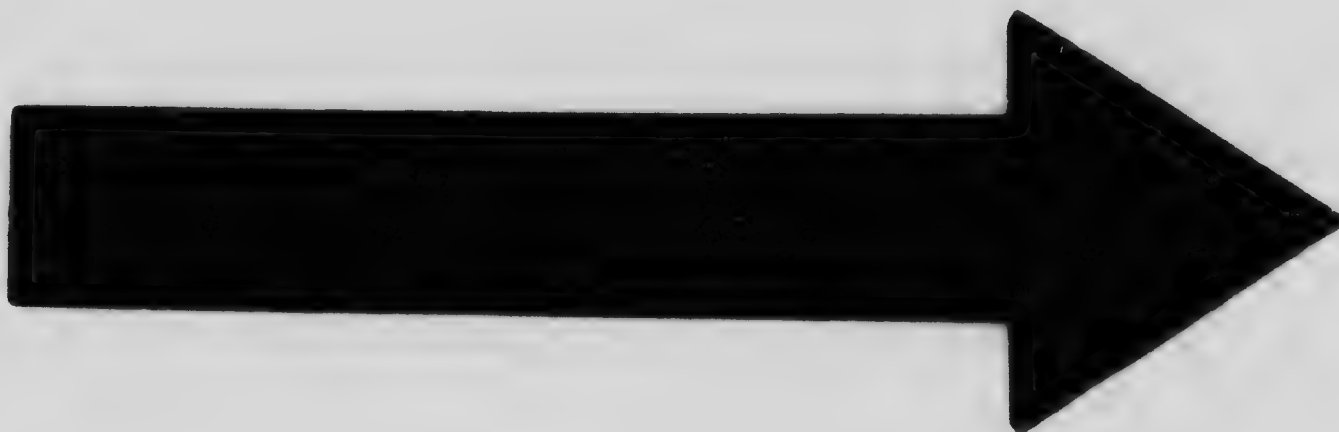
Table 38. Writing, Frequencies.

Letters per minute	Speed.			Percentage.	Quality.		
	Grade 4	Grade 6	Grade 8		Grade 4	Grade 6	Grade 8
11 to 20	2	....	....	21 to 30	6	1	....
21 to 30	9	....	....	31 to 40	44	25	....
31 to 40	25	....	....	41 to 50	12	54	3
41 to 50	8	10	5	51 to 60	....	6	8
51 to 60	9	12	2	61 to 70	....	....	7
61 to 70	6	24	5	71 to 80	....	....	8
71 to 80	3	19	5				
81 to 90	....	21	8				
91 to 100	....	....	1				

It appears that the maximum speed is attained in the Ottawa Schools in the region of grade 6 but at the expense of small improvement in quality. In the two highest grades the chief stress has evidently been placed upon the quality of handwriting, at a considerable sacrifice of speed.

READING.

A third and certainly the most important of the tool subjects is Reading. Its prescribed aim is "to train the pupil so that he may be able to find for himself the thoughts and feelings conveyed by the written or printed words and may be able to communicate them to the listener so that he may appreciate them". The first part of this twofold aim should receive by far the larger place in school work since most of the reading of the great majority of people in after life will be of the silent variety. Silent reading will always be one of the chief instruments for gathering information and for continuing the education begun

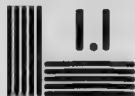


MICROCOPY RESOLUTION TEST CHART

(ANSI and ISO TEST CHART No. 2)



1.0



1.1



1.25



1.4



1.6

4.5

5.0

5.6

6.3

7.1

8.0

9.0

10

11.2

12.5

14

16

18

20

22.5

25

28

31.5

36

40

45

50

56

63

71

80

90

10

11.2

12.5

14

16

18

20

22.5

25

2.8

3.2

3.6

4.0

2.5

2.2

2.0

1.8



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at school. The Public School can render but few greater services to the child than to teach him this useful art and to inspire him with a desire to search the great storehouse of literature. To this end a careful choice and an adequate supply of supplementary reading is imperative. That closer association with the Public Library already recommended in Chapter II. must be assured. Strange to say, the Public Schools, up to the present, have spent an unduly large proportion of time on Oral Reading.

The tests applied in this subject were wholly in the field of silent Reading. This course seemed warranted both on account of the greater importance attached to this phase of the subject and on account of the difficulty of ascertaining in oral work to what extent the saying of words is accompanied by an appreciation of their meaning. Two points, speed and quality, were kept in view and tests were conducted in accordance with certain accepted methods where results have already been standardized. (1:20). See tables 39 and 40.

Table 39. Reading, Average Scores.

Grade	4	6	8
Standard Speed (in words per second)	2.4	3.2	4
Ottawa " " " "	2.9	3.6	4
Standard Quality (in words written)	28	38	50
Ottawa " " " "	24.5	31.5	39.8

Table 40. Reading, Frequencies.

Words per 30 seconds	SPEED			Words Written	COMPREHENSION		
	Grade 4	Grade 6	Grade 8		Grade 4	Grade 6	Grade 8
0 to 20	2	....	....	0 to 10	12	6	....
21 to 40	6	....	....	11 to 20	22	15	1
41 to 60	14	9	2	21 to 30	26	28	10
61 to 80	17	15	6	31 to 40	15	20	8
81 to 100	30	28	13	41 to 50	15	12	19
101 to 120	8	19	6	51 to 60	3	10	13
121 to 140	3	7	14	61 to 70	....	6	2
141 to 160	13	9	5	71 to 80	....	1	....
161 to 180	....	4	6	81 to 90	....	....	....
181 to 200	....	8	....	91 to 100	....	1	....
201 to 220	....	....	1				

The median scores and average deviations are shown in table 41.

Table 41. Reading, Medians and Average Deviations.

Grade	Speed (Words per second)			Comprehension (Words written)		
	4	6	8	4	6	8
Medians	2.87	3.41	3.78	25	31	44
Average Deviations	.92	.93	.99	10.4	13.2	10.3

The wide range of ability shown by each grade both in speed of reading and in comprehension of the matter read would seem to indicate insufficient training in silent reading. The relatively low scores in comprehension would strengthen this conclusion.

ARITHMETIC

Still another instrumental subject, Arithmetic, occupies a prominent place on the curriculum. As one of the "three r's" it has always been deemed most important. There is, however, a marked tendency to decrease the amount of time formerly allotted to Arithmetic on the time-table. At the same time it is recognized that a use of the fundamentals of this subject must play an even larger part in the life of the people to-day than it has in the past. The argument for less time is based on the belief that a certain excess of time, formerly spent on drill, does not secure commensurate results in an increase of speed or of accuracy. In fact only a reasonable degree of speed is required by the ordinary individual. What is needed is a closer connection between the number concept and the ordinary everyday situations of life. As Dr. Bobbitt expresses it, the need is for "more mathematical-mindedness" or to develop "the ability for, and the habit of, thinking in figures" (2:46-47).

The Departmental aim of teaching Arithmetic is "to train the pupil to become ready, accurate, and prompt in the use of numbers in calculation, and to reason correctly". The ability of Ottawa Public School pupils in speed and accuracy, as involved in the four fundamental operations, has been measured by the use of the Courtis Tests, series B. Tables 42 and 43 show the results as far as space will permit.

Table 42. Arithmetic, Speed (in Examples Attempted).

Grade	Addition			Subtraction.			Multiplication.			Division.		
	4	6	8	4	6	8	4	6	8	4	6	8
Attempts												
0 to 3	....	1	....	2	....	1	4	....	1	6	5	1
4 to 5	5	2	....	4	1	....	5	4	2	10	....	4
6	1	4	....	8	....	....	6	2	4	3	3	....
7	3	....	2	3	2	1	3	6	4	2	5	5
8	3	5	2	2	4	1	4	6	3	1	9	4
9	6	7	5	3	5	2	1	6	4	1	2	3
10	3	6	8	1	3	4	3	4	5	1	3	6
11	4	5	6	....	6	3	....	7	8	1	3	2
12	....	6	3	1	6	3	....	2	4	....	2	9
13	1	2	2	2	2	2	....	1	....	1	3	1
14 to 16	....	4	6	....	9	10	....	3	3	....	7	3
17 to 19	....	1	1	....	4	4	....	....	....	....	1	....
20 to 24	....	....	3	....	1	7	....	2	.	....	....	....
Median Speed	8.66	10	10.83	6.37	11.66	14.16	6.16	9.16	9.7	4.75	8.5	9.83

Table 43. Arithmetic, Accuracy (in Examples Right.)

Grade	Addition.			Subtraction.			Multiplication.			Division.		
	4	6	8	4	6	8	4	6	8	4	6	8
Rights												
0 to 2	8	6	2	6	2	1	10	6	3	14	8	3
3 to 4	7	9	0	7	2	2	10	9	4	7	8	4
5	4	6	....	4	2	1	3	4	4	1	....	1
6	3	5	3	4	4	1	2	6	8	1	7	4
7	2	4	7	1	6	1	....	3	4	2	6	4
8	1	3	5	2	5	1	1	5	3	....	3	4
9	1	2	6	2	4	2	....	3	5	....	1	5
10	....	2	5	....	1	5	....	3	3	....	1	4
11	....	1	5	....	2	5	....	1	2	....	2	4
12	....	....	....	....	4	4	....	1	....	1	3	3
13 to 15	....	4	1	....	9	7	....	1	2	....	3	2
16 to 19	....	1	4	....	1	3	....	1	....	....	1	....
20 to 24	....	....	....	....	1	5	....	....	....	....	....	....
Median Accuracy	3.9	5.7	8.83	4.5	8.75	11.5	3.1	6	6.5	2.16	6.35	8.25
Standard Scores	6	10	12	7	11	13	6	9	11	4	8	11

The standard for accuracy is 100 per cent. It is obvious that while grades 4 and 6 are quite abreast of the standards for speed throughout and all are rapid in subtraction, yet there is a lamentable general deficiency in accuracy. This is a problem which will require special investigation by the inspectors. The need is all the more acute when we recall that Ottawa spends 17.3 per cent of school time on Arithmetic as compared with 13.2 per cent spent by American cities from which the standard scores were derived. The percentages of efficiency, as defined by Courtis, in the order in which grades and operations are used in table 43 are as follows: 0, 4.6, 2.7; 3.8, 7, 10.5; 3.8, 0, 2.7; 11.5, 7, 7.9.

GEOGRAPHY.

Perhaps in no subject more than in Geography have changes in method and content been more marked during the past two decades. It has passed from a study about the earth to a study of the earth in relation to man. It consists now not so much in the mere memorizing of facts as in the understanding of relationships, which latter is incidentally the best means of accomplishing the former. Instead of teaching the subject, the teacher to-day places chief stress on the teaching of the pupil. Work in this subject aims, as expressed in the Course of Study, "to train the pupil to appreciate the most important of the following in their relationships to human activities: the natural features and phenomena of the earth; the races, nationalities, and institutions of man; and the economic products of the different countries." Naturally, such a study must be approached through a treatment of home geography if the spirit of the new method is to be realized. This will necessitate a certain amount of field or excursion work with the class. To ascertain to what extent this practice obtained among the Ottawa teachers, the following question was included in the questionnaire already referred to in Chapter IV: "How many times during the year have you taken your class on an excursion for Nature Study or Field Geography, or to visit an exhibit or industry?" Thirty-four teachers had taken excursions averaging 2 each for the year. When the content of the question is examined, it becomes plain that Geography can claim but little out-of-door attention.

The old text-book method, involving the memorizing of lists of names, has generally been abandoned and in the lessons observed an effort was made to invest the subject with interest and to present the facts in causal relationship as far as possible.

Interest is secured by the introduction of sufficient detail to call up a real situation. As an aid to this, suitable supplementary reading matter is provided. That more material is needed is recognized by the Junior Inspector in his report:

"If teachers of geography could afford to travel more, new interest could be added to their teaching. As it is there must be a never-ending effort to secure such aids as pictures, products, stories, and graphic descriptions can afford in making as concrete as possible class-room presentations." (14:1916:14).

Reference to the list of Supplementary Reading Books given later in this Chapter shows for grades above 3 an insufficiency of geographical material both in variety and in the number of copies.

HISTORY.

It is events such as the great world-rocking war of to-day that bring home the need for every citizen to grasp as fully as possible the national spirit, aspirations, and ideals of the country to which he owes allegiance, and to understand why it is worth fighting and dying for. And again, in a democracy such as that in Canada where every boy and girl expects to become a unit of government, the subject of history must receive increasing attention in the Public School. The proper understanding of present day conditions necessitates a knowledge of their development through the past. While much of this functional treatment must necessarily be left for the High School, sufficient should be undertaken in the Public School course to give those who may get no further schooling an insight into the meaning and purpose of History. The fact that boys and girls across the Interprovincial Bridge have different schools and text-books from those in Ottawa; that recent temperance legislation was not coincident in Ontario and Quebec but that both provinces were afterwards simultaneously affected by other laws, are facts which can only be understood in the light of Confederation. This again leads back to previous conditions, wars, and conquests and in turn to earlier colonization days. Along somewhat similar lines there should be a continual attempt to relate the past and present. The City of Ottawa is most favoured with opportunities for beginning the study of history topics at home, in the numerous monuments and statues at various points, in the Archives and Museum, in the parliamentary debates when important legislation is in the making. This suggests that there must be con-

siderable excursion work in History also. There must be frequent occasions for correlation of History with other subjects. History may often become Geography and vice versa. Physiographic conditions determine settlements, boundaries, founding of cities, and battlefields. What a service might be rendered to the conception of the unitary nature of knowledge if the line fences between subjects were only more frequently removed so that on occasion Geography might become History, History become Composition, and Composition be Writing, Spelling, Reading, or Grammar in turn.

Several lessons observed in this subject were successfully striving towards one or more of the authorized aims, "to arouse in the pupil an interest in historical characters and events, to give him a knowledge of his civil rights and duties, to stimulate a love of high ideals of conduct, and to enable him to appreciate the logical sequence of events." History as a memory subject ought never to return. It is hoped that the restoration of the examination in History for the High School Entrance will not stampede Ottawa teachers into again teaching the subject rather than the pupil. The prescribed ends are most important even though some of the most valuable results may not be tested by a written examination.

COMPOSITION.

One hundred and fifty minutes per week are set apart in the first six (now five) and 90 minutes in the last two grades "to train the pupil to speak and to write good English as a fixed unconscious habit and to think clearly and logically as a basis for clear and logical expression." Of the Composition lessons observed but two types will be mentioned here in connection with this aim. Several lessons in the two highest grades made good use of the concrete situation as subject for the composition. For example, in a preceding lesson a class had taken part in a very interesting experiment in making coke. They were then asked to write a description of the process. The other type which seemed to predominate in the written composition of the lower grades was the reproduction story. Without denying a legitimate place to either type, the question is raised as to which will contribute most to clear and logical thinking and to natural expression.

NATURE STUDY.

Probably the latest of the "new" subjects to take root in the Ottawa Public Schools and to become generally established is Nature Study. Much help and encouragement was given to teachers by a circular issued by the Junior Inspector in 1915 containing suggested topics and methods. Still further confidence was given to the teacher who felt himself lacking in training in this subject by the appearance of the Ontario Nature Study Manual the following year. Prior to the advent of these helps, the work, where attempted, was in a more or less chaotic state, lacking proper articulation from grade to grade. Still more important than an organized subject matter in this case is the spirit and the method of teaching. Much help has been afforded by boxes of specimens, birds and animals, loaned by the Museum and circulated among the schools. The use of these specimens can contribute properly to one of the specified aims, "to broaden and deepen the pupil's interests and his sympathy with nature," only if used in conjunction with a wider setting than the school-room can supply. Nature cannot be understood or appreciated when viewed with the back to the window. The Inspector, in his report, gave expression to this same truth by means of a quotation:

"I thought the sparrow's note from heaven,
Singing at dawn on the alder bough;
I brought him home in his nest at even;
He sings the song, but it pleases not now,
For I did not bring home the river and sky:—
He sang to my ear,—they sang to my eye."

The lessons observed in this subject were of a high order. One teacher was using a black-squirrel specimen, stuffed and mounted, without his forest habitat, but the lesson revealed the fact that problems had been previously assigned and that pupils came prepared with some degree of familiarity with its haunts and habits.

The movement in connection with "war gardens" throughout the country generally has given an impetus to work of this character undertaken by the schools. This work affords one of the very best angles of approach to a study of nature. It lacks the formality, artificiality, and forced motivation of much that goes under this name. The Ottawa Public Schools have entered upon the work of school gardening and are extending their programme by way of establishing Home Garden Clubs among the

pupils. In 1917 there were 1000 children who had plots assigned in the school garden and 300 more cultivated plots at home. The work is under the charge of a teacher specially qualified, who devotes most of her time during the season to planning the garden, supervising and assisting pupils, and directing teachers in their work with pupils. This teacher is on duty throughout the vacation months as well.

The out-of-door nature of the work is quite in keeping with the agitation for more open-air classes and for more time on the playground and should commend it as contributing to the health of the child. A very valuable form of manual training is derived at the same time. The economic importance of such work as it grows and is carried more and more into the homes will not be small. The formation of habits of thrift and industry and the provision of an interest that will fill the leisure time of many in after life ought to make this project worthy of all encouragement.

MANUAL TRAINING.

The man with any marked degree of manual dexterity is at a premium to-day. The Public Schools do not aim, however, at turning out a specialized product along this line. The hand-training is given primarily as a means of expression that will stimulate the intellectual activities. The knowledge and skill acquired is of such a general character that every boy will be the better for it and every home will supply opportunities for frequent application of it. What boy is not the better for being able to distinguish between a cross-cut and a rip saw, or for being able to drive a nail home true?

The Ottawa Schools cannot be accused of strong vocational tendencies in the regular grades. The manual work is limited chiefly to one medium, wood. The junior grades even yet spend much time on formal models. The opposition to any work which has a practical bearing seems to die a slow death. However, boys in the senior grades are permitted now to make articles of their own choice for their own use. Bird-house competitions have been carried on with much interest. Numeral frames for all the Primary grades were made during the past year. In the two special schools—Manual Arts, and Higher English and Applied Arts—work of a somewhat enlarged and more advanced nature is carried on. The installation of a lathe and band-saw has added

much interest. Pottery and metal work are also carried on here. An excellent means is being utilized to gain the attention and interest of the community by the holding of school exhibits to which parents are invited, and by the sending of displays of school work to the Canada Central Exhibition.

MUSIC.

In the United States \$600,000,000 is spent annually on Music in performances and education (12:1917:49:14). It is an important factor in a people's life and there is an increasing demand for more Music in the schools and in community life generally. The part Music is playing in the war, at home and overseas, in the camp and on the field, brings its claims clearly before thinking people. Its influence upon the emotions and through these upon the actions ought to make it a vital part of any course of study designed for all the people. The subjective influence, socializing tendency, and recreational value, each presents its own claim. The report of the Supervisor in this subject clearly shows to which he attaches the greatest importance. "The study of Vocal Music in our schools is destined to bear rich fruit in the future social and musical life of our community." "The choirs and musical societies of the city are more and more being recruited from former pupils of our Public Schools." That there is an effort to do more than to provide an agreeable change in the routine of school work is evident in the power gained by pupils to read music from both tonic sol-fa and staff notation, and in the understanding they have of elementary theory. During the past several years a number of schools have undertaken the rendition of cantatas at their public entertainments. In some schools, fortunate enough to possess a teacher of special ability, she teaches a large part of the Music throughout the school. The School Board has recently recognized a growing claim on the part of instrumental music inasmuch as a pupil is allowed certain time during school sessions for such lessons.

PHYSICAL CULTURE.

There should be a very intimate correlation of the work in Hygiene, Physical Culture, and the Nurses' Department. The findings of the Medical Boards in their examination of the manhood of Canada as to fitness for military service revealed the fact that the percentage of unfit varied from 40 to 70. It is quite certain that much of this could have been prevented by a better school hygiene, by more organized games, and by rational exercises. Ottawa has been alive to the need for such provision

by making the work in Hygiene very practical, by encouraging supervised games through inter-school leagues and tournaments and by having practically every teacher on the staff qualify as a Physical Instructor under conditions laid down by the Strathcona Trust Fund.

A health chart or hygiene sheet is kept for each child where entries are made by teacher and nurse as to general health and special ailments. Measurements of height, chest expansion, and weight are recorded regularly. The proper developing exercises or corrective measures may thus be promptly instituted. It is suspected, however, that in many cases this opportunity is overlooked and that all are treated as a class regardless of individual needs. Low or round shoulders, contracted chest, crooked arms, bow-legs, torpid liver, and other common defects, all require treatment of a more specific character than is afforded by ordinary platoon drill.

SUPPLEMENTARY READING.

In addition to the prescribed texts it is expected that much supplementary literature, varied in character and suited to each grade, shall be covered. The supply of such books as found in a typical school, Percy Street, is given below. Only the names of those books found in sets of at least one dozen are mentioned.

Name of Book.		No. of Copies
Grade I.	Red Riding Hood	15
" "	The Little Red Hen	14
" "	Three Little Kittens	25
" "	The Three Bears	15
" "	The Three Pigs	15
" "	Animal Pictures, Sets A and B (each) ..	10
" "	Blackie's Readers, 4 sets (each) ..	4
" "	Story of a Water Drop ..	19
" "	Little Wood Friends	19
" "	Single copies of different books	32
" 11.	Brownie and the Grocer	44
" "	The Golden Cobbler	45
" "	Three Bad Pups	43
" "	Jack and the Beanstalk	46
" "	Hop O' My Thumb	46
" "	Little Red Riding Hood	48
" "	The Wolf and Seven Kids	46

Name of Book.		No. of Copies
Grade II.	Cinderella	46
" "	Infant Readers I. and II. (each).....	45
" "	Highroads of Geography I.	44
" "	Highroads of History I.	44
" III.	Here and There Stories	22
" "	How and Why Stories	24
" "	Robinson Crusoe	41
" "	Geography Readers	40
" "	History Readers	40
" IV.	Arabian Nights	36
" "	The King of the Golden River	60
" "	Gulliver's Travels	43
" "	Europe Then and Now	21
" "	The Frog Prince	13
" "	The Ugly Duckling	14
" "	Aesop's Fables	20
" "	The Wonderful Adventures of Tom Thumb	14
" "	Man's Work	23
" "	The Magic Garden	21
" "	Highroads of Geography I.	33
" "	Highroads of History I.	38
" V.	Story of the Human Body	37
" "	The King of the Golden River	24
" "	Modern Stories	36
" "	Out-of-door Book	40
" "	Stories from the Classics	42
" "	Legendary Heroes	44
" "	Myths from Many Lands	43
" VI.	The Song of Hiawatha	45
" "	A Christmas Carol	36
" "	Rip Van Winkle	36
" "	A Wonder Book	75
" VII.	The Lay of the Last Minstrel	48
(formerly		
Grade VIII.)	Evangeline	47
" "	Birds and Bees	46
" "	Kingsley's Heroes	42
" "	The World Encompassed	40
" "	Selections from Longfellow	36
" "	Robinson Crusoe	42

RECOMMENDATIONS.

1. The Ottawa Public Schools have been securing excellent results in Spelling. It is thought that this record might still be maintained if less time were spent on formal spelling lessons in the two upper grades. In order to accomplish this, a strict insistence on the correct spelling of words in all written work will be necessary. The requirement that all exercises containing careless spelling shall be re-written will soon reduce mistakes to a minimum. The chronically poor spellers may frequently be given formal lessons in this subject while others are reading some supplementary work.

2. Similarly less time is recommended for Writing in the senior classes. While they are at present deficient in this subject, improvement may be looked for through more attention to the quality of all written work. Care should be taken to see that proper position is maintained throughout every written exercise. Teachers should become familiar with the method of submitting standard tests and should frequently apply them to their classes in measuring speed and quality. The use of a more permanent form of note-book for all written work would put a premium on the pupil's best work.

3. Pupils in the Ottawa Public Schools should do several times as much reading as is done at present. It is more silent reading that is needed, reading done with a definite task assigned, where comprehension will be tested. In order that time may be available for the required amount of such work, an adequate supply of books bearing on History, Geography, Hygiene and other subjects must be provided. There should be enough books in each set to place a copy in the hands of each pupil.

4. The deficiency in Arithmetic can hardly be overcome by recommending more time. The time now spent is already relatively long. A great economy of time and effort could be effected by supplying classes with printed copies of questions. Thus a maximum of drill could be obtained in a minimum of time. The copying of questions is often the tedious and time-consuming part of the work. At other times when it is found desirable to put the stress on solutions to problems much more can be accomplished by accepting indicated solutions without requiring the mechanical simplification.

5. An additional supervisor for Geography has already been recommended (Chapter VI.). There seems to be more difficulty here than elsewhere in catching the new point of view

and in adapting methods to realize the new aim. Only recently have training methods in the Normal Schools become sufficiently changed to correct former tendencies. As a result many of the older teachers need the additional help and guidance which only an expert can give. The urgent need for this is evidenced by the small amount of field work undertaken. The understanding of man's relationship to his environment can only properly begin when man and nature are observed in field, factory, market, and elsewhere. Such an approach to the study of geography is essential for the earlier grades.

An agitation for additional material required to make the work more vivid and interesting, such as supplementary literature, lantern slides, and moving pictures, should be carried on insistently until this need is met.

6. One respect in which the History lessons observed could be improved is in the creation of an historical atmosphere chronologically in keeping with the particular period under study. If pupils were enabled to sense some of the conditions of life, social, domestic, industrial, current at the time of each important event presented, they would obtain a much better perspective and understanding. This will entail a very widely read teaching staff and a wealth of reference material for teachers and of visual aids for pupils.

The list of supplementary books given above shows a lamentable dearth of historical literature for the upper grades.

7. It has been previously intimated that an unduly large amount of reproduction work was given in the junior grades. More use of the concrete situation is recommended here. In the senior grades it is thought that less time might be spent on Composition as such or as a separate subject. These pupils have already been made familiar with much of the mechanics and any further formal work along this line may very well be presented through the greater attention given now to the application of Grammar to Composition. More freedom and naturalness of expression would be secured by using the written work in other subjects as the basis for helpful work in Composition. Strict attention in all written exercises should be paid to the correct form and language, and anything judged below a pupil's best should be required to be re-written in full.

The absorption of much of the Writing, Spelling, Reading, and Composition by the content subjects in the present two

upper grades of the Public School would provide a place for the introduction of Foreign Languages, Algebra, and Geometry in the Junior High School.

8. It is recommended that more excursion work be undertaken in order that nature may be studied as much as possible outside the school-room. Most of these excursions should be under the personal supervision of the class teacher.

The garden work, already commended, can only become firmly established and can only attain the desired expansion when teachers themselves become enthusiastic gardeners. The questionnaire submitted to them revealed few who reported this as a special interest. Encouragement should be given teachers to acquire suitable qualifications for conducting garden work. Courses at Guelph during the summer vacation are accessible to all teachers. Some recognition of such effort should be made by the local Board in the salary schedule.

9. Since most of the world's work is accomplished under a system involving a division of labour, each worker specializing on his own particular task, it is thought best that boys should receive some of their Manual Training under somewhat similar conditions. Therefore it is recommended that more community work be introduced into the classes. It is also felt that more work of a practical nature would prove beneficial. The boys in the senior classes could carry out many undertakings in connection with school repairs. This is advocated without regard to the economic effect of such work but wholly on the ground that work of a practical nature under perfectly natural conditions makes a stronger appeal to boys as well as to men. The writer has never seen boys work with greater zest and interest than when a class undertook to erect a permanent building to be used as a dressing-room in connection with their skating rink.

10. Throughout Canada and the United States a strong feeling has arisen among public-minded citizens that ground has been lost in the matter of community singing. Its value for social, religious and patriotic reasons will hardly be questioned. It must fall upon the Public School—"the residuary legatee of the home," and it might be added of the community—to save the situation. The Schools of Ottawa have done much in the way of developing power to read music and to produce good tone. The wider use of some teachers specially qualified for work in Music would bring many other classes up to a higher standard. More should be done in the way of a systematic effort to develop

an appreciation of the best and an enjoyment in the singing exercises. Pupils should be given frequent opportunity to hear some really good music either by artists locally available or from phonographic reproductions. Regular occasions should be found for bringing the school or groups of classes together for singing.

It would be an innovation for Ottawa or for Canadian schools generally, but would hardly be expecting too much, to ask the Board to provide a certain number of instruments whereby those who wished might begin the study of instrumental music. In this way much talent would be developed and genius might be discovered that might otherwise remain dormant.

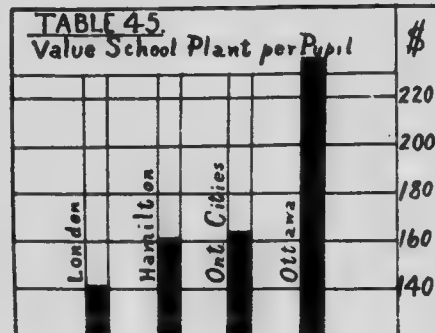
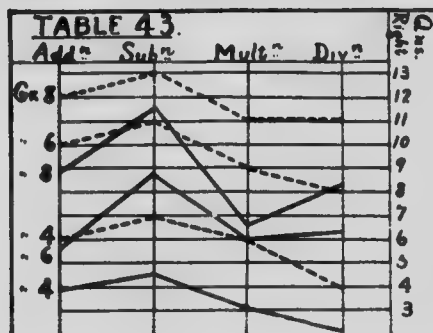
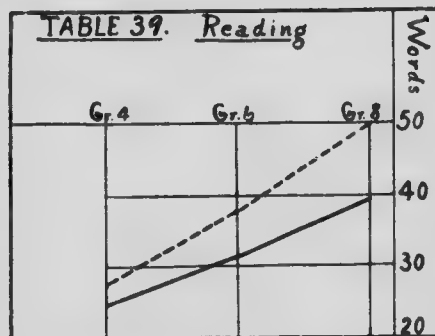
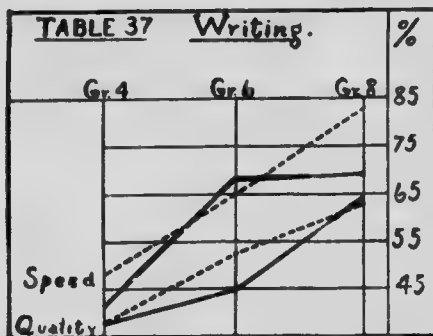
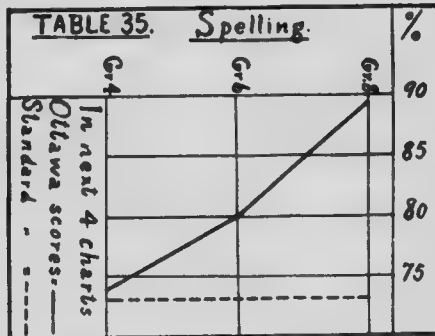
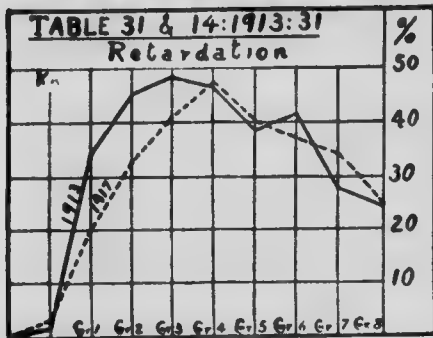
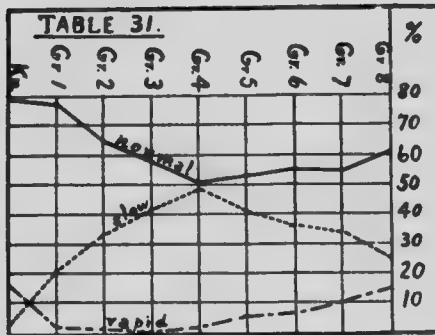
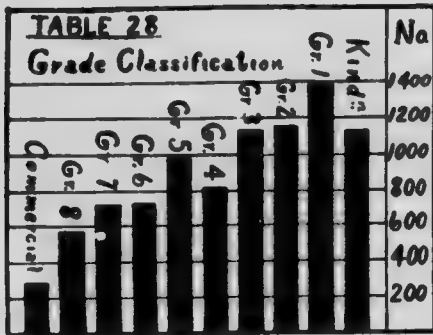
11. Physical Training on its formal side of Military Drill and Strathcona Exercises is well provided for in Ottawa. Athletics in the form of organized games also receives much attention but here, as in most Ontario cities, the tendency is to strive for a winning team rather than to aim at a good average for all. The boy who takes little interest or who has developed little skill may go through school almost wholly neglecting this important phase of training. Games should be made compulsory for all who are physically fit. This may seem to rob athletics of the spirit of play, but the few who need compulsion or encouragement at first, with the acquisition of a little knowledge and skill in games, will very soon manifest a voluntary disposition to take part.

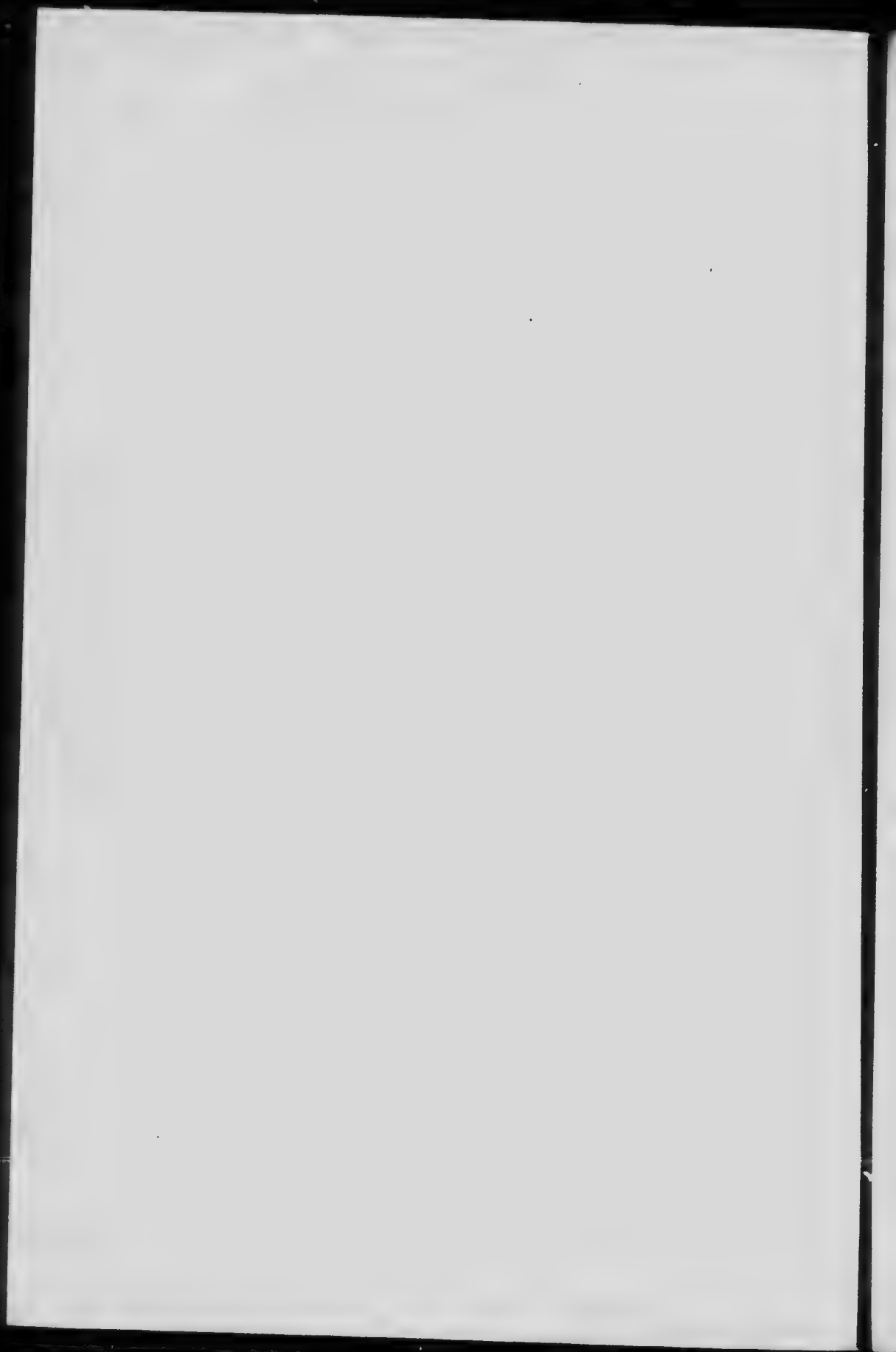
CHAPTER VIII.

COSTS.

The excellence of a system of schools may not be reckoned in proportion to the amount of money expended upon it but, in order to provide ample playgrounds, healthful buildings, useful equipment, and capable teachers, sufficient funds must be forthcoming. It is hardly to be expected that present expenditures can be reduced or can even remain stationary but the chief concern of citizens should be to know whether adequate results are obtained from the annual investment.

It is a long and varied vista down the Public School highway from 1849 to the present. In that year the Public School Board held its first meeting; the Separate School system had not yet





evolved; all teaching was done in rented buildings; the teaching staff consisted of 5 males and 7 females; the enrolment was 203; the total school budget amounted to £132 9s. 6d. of which the government grant was £68 6s. 9d. By 1852 salaries had been raised considerably, each male receiving £80 per annum and each female £57, but "teachers must furnish school-rooms and fuel" (6:50). Since then the enrolment in the elementary schools of Ottawa has increased more than 80 fold; the annual expenditure of public money on these schools has been multiplied by nearly 750. Yet it would be an unwarranted venture to fix the attainments of the present day graduate of the Public School as an integral multiple of the pupil's knowledge, power, and skill in those early days.

The government grant twenty years ago was 4.8 per cent of the amount raised locally. In 1917 the legislative grant was but 2.4 per cent of the local revenue for schools (14:1917: Table N).

The average thinking citizen of to-day will agree that the arguments of President Eliot of Harvard in 1902 in behalf of more money needed for the Public Schools (4:23) are still applicable to conditions prevailing in Canada. In another instance, figures from the United States (7:6) would apply with equal point in Ontario. The annual expenditure for police, prisons, and other negative corrective measures reaches the enormous sum of \$1,100,000,000, while for churches, schools, and other positive, constructive efforts, the annual expenditure is but \$600,000,000. Obviously it would be good business, as well as good statesmanship and good philanthropy, to put more stress on educative endeavour in order that so much correction might not be necessary.

The present war has amply demonstrated what can be done in the matter of raising money. Had the people of Ottawa been asked in 1913 for \$1,000,000 for schools, they would have stood aghast. But since then they have voluntarily paid \$2,073,696.16 for Patriotic and Red Cross purposes. In addition they have cheerfully raised war taxes and are making war loans and are still able to "carry on". In normal times with these sums what ambitious programmes of education might have been staged. The adequate financing of educational efforts is not a matter of ability but of will.

The relative ability of Ottawa to support her Schools may be ascertained by an examination of table 44.

Table 44. Assessment and Debt. (26:1917)

	Total Assessment.	Taxes		Debt		Assessed Wealth per Capita
		Municipal	School	Municipal	School.	
Ottawa	\$111,815,510	\$1,906,769	\$767,408	\$17,223,719	\$1,818,674	\$1093
Hamilton ..	79,964,602	1,490,410	511,774	12,583,843	1,325,236	742
London	39,362,179	1,048,908	380,594	7,849,680	1,084,985	704
Ontario cities	1,059,892,904	20,854,540	7,167,694	198,462,559	23,124,156	1026

The cumulative interest of these places in their schools may be judged from one angle by the present value of the school plant. This is given in table 45. (19:1917).

Table 45. Value of Public School Plant.

	Average Public School Attendance	Value of Land and Buildings	Value of Equipment	Amount Pupil
Ottawa	7,516	\$1,692,210	\$91,991	\$237
Hamilton	11,246	1,762,819	44,619	161
London	9,244	1,249,980	55,000	141
Ontario Cities	118,425	18,706,758	713,551	164

The present interest of each place may be better judged from the 1917 expenditure on schools, as given in table 46.

Table 46. Expenditure on Schools, 1917.

	Asses'd Wealth per Dollar Locally Rais'd for Schools	Total Expenditure on Schools	Percentage of Total Tax Expended on Schools	Amount per Capita Rais'd for Schools
Ottawa	\$145	\$788,371	29	\$7.56
London	103	496,345	27	6.81
Ontario Cities	148	.....	26	6.96

Thus it appears that Ottawa ranks high among the cities of the province in the amount of money spent on schools, both reckoned in totals and on a per capita basis.

The expenditure on Public Schools alone, with the cost per pupil is given in table 47 (13:1917:159 and 127). The number of pupils used as a basis for these calculations is that half way between the total enrolment and the average attendance. This seems to be a fairer procedure than to use either of the other numbers, as provision must always be made for more than the average number of pupils, and the number actually receiving instruction usually falls short of the total enrolment.

Table 47. Expenditure on Public Schools.

	Expenditure for Public Schools, Exclusive of Sites and Buildings	Number of Pupils Used in Calculations	Cost per Pupil.
Ottawa	\$ 369,359	7,946	\$46.48
Hamilton	385,503	12,674	30.42
London	272,730	6,981	39.07
Ontario cities	5,190,020	117,550	36.25

Here again Ottawa ranks higher than any other city in Ontario in the expenditure per pupil. It would fall short of the truth, however, to infer that this higher cost in itself represents either lack of economical management or greater value given to the pupil. There are certain expenses incidental to the nature of the climate (see table 1) such as installation and maintenance of double windows, increased amount of fuel, more skilled janitor service, and more costly buildings, which make school expenses greater in Ottawa. It is also true that the higher salaries for teachers in Ottawa are due in part to the higher cost of living (see table 23) as well as to a larger percentage of male and of higher certificated teachers (see table 20).

The chief expenses of a school system may be briefly summed up under seven heads, as follows: Administration, Supervision, Instruction, Operation, Repairs, Interest and Sinking Fund, and Capital Outlay. For Ottawa and London, Ont., this summary is given in table 48. A more detailed statement of costs per pupil in certain important items has been drawn from the Inspectors' reports for 1916 and presented in table 49. London has been chosen for comparison as it approached Ottawa most closely in table 47, and besides, data was more readily accessible.

Table 48.

Summary of Expenditure, 1918.

	Adminis- tration.	Super- vision	Instruc- tion.	Opera- tion.	Repairs	Interest & Sink- ing Fund	Capital Outlay
Ottawa	\$17,431	\$10,100	\$276,455	\$42,303	\$7966	\$82,083	\$ 2,615
London	7,615	4,940	183,272	32,427	7766	53,278	127,206

Table 49.

Detailed Statement of Costs per Pupil

	Teachers	Supervisors	Inspectors and Administration	Janitors	Nurses and Dentists	Fuel	Water	Books and Other Supplies
Ottawa	\$31.85	\$1.27	\$2.19	\$3.05	\$.59	\$1.69	\$.58	\$2.47
London, Ont.	24.99	.71	1.09	2.23	.48	1.61	.29	.89

Better paid teachers, more supervision and inspection, a more skilled janitor service, more attention to hygiene, more water used in sanitation and ventilation, more and better supplies should result in a quality of school work that would justify the extra expenditure.

The total school expenditure will naturally increase with the attendance but one might expect the cost per pupil to be reduced owing to a relative constancy in certain expenses, such as that for administration. Experience shows, however, that increases in costs far outstrip increases in school population. During the past quarter of a century, this has been occasioned by the steady increase in the cost of various commodities, by a general rise in the standards of living, by the fact that it costs more to build the large modern buildings which are gradually replacing the smaller and older ones; the addition of new subjects, such as Art, Manual Training, and Domestic Science, has been expensive; the new activities in connection with school hygiene, retarded pupils, mental defectives, and the School for Higher English are costly. It is but a fair expectation that this increase in cost will be continued, for example, by the introduction of smaller classes, by more provision for industrial classes, and by the building of more assembly halls, gymnasiums, and swimming-pools. Table

50 shows the increase in cost per pupil since 1895, based on the Table 50.

Cost per Pupil, 1895—1917.

	Registration in November	Cost per Pupil.	*Expended on New Buildings	*Expended on New Sites
1895	3,822	\$21.00	\$24,701.08	\$3,386.33
1897	4,413	19.13	66,836.10	3,950.00
1899	4,755	21.34	22,235.54	3,310.50
1901	4,370	23.40	45,650.53	7,557.33
1903	4,564	27.15	27,939.51	5,500.00
1905	5,063	26.64	98,140.73	15,829.54
1907	5,365	35.23	237,464.25	18,560.23
1909	6,688	38.72	104,410.90	14,711.45
1911	7,171	42.79	133,512.56	23,146.14
1913	7,997	45.38	289,129.85	85,256.85
1915	8,625	51.43	34,548.03	.....
1917	8,912	52.16	6,454.11	.....

*(Each entry in this column, except for 1917, includes expenditure for the following year.)

school registration for November of each year and not including costs due to sites or buildings (14:1917: Table N):

While the enrolment during this time has increased 2.3 times the expenditure has increased 5.7 times.

Curves, based on figures in 13:1917: Tables N and I, to show the relative rates of increase in (1) Gross School Income from the City Treasury, (2) Registration of Pupils, (3) Cost per pupil, (4) The Teaching Staff, and (5) Average Salary for Teachers, are shown in Figure 3.

The gross income necessarily increases much more rapidly than either cost per pupil or average salary, when the increase in the staff and in registration is taken into account. The income is sufficient to cover both totals only because salaries have been used in computing the cost per pupil. Salary increases have been referred to in Chapter V. Some explanations concerning details in the increase of costs per pupil are offered in the following paragraphs.

Since the cost of educating a Kindergarten pupil should not be as great for half-day instruction, a separate statement of costs is given in table 51.

Table 51. Cost per Pupil, Regular Grades and Kindergarten

	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917
	*	*	*	*	*	*	*	*	*	*	*
Regular											
Grades	37.19	35.73	40.13	41.26	44.42	46.75	47.86	52.07	52.84	53.63	55.92
Kindergarten	31.49	33.78	35.53	34.62	37.85	36.23	39.25	41.53	35.54	31.72	30.64

From table 50 it will be observed that there has been an increase, in cost per pupil, of \$6.78 during the past 5 years. An analysis of Table N (14:1917) reveals the points at which increases were made (see table 52).

Table 52. Increases in Cost per Pupil, Detailed, 1913-1917.

	Teachers	Interest	Janitors & Supplies	Books and Supplies	Officials	Fuel	Repairs	Superannuation	Water	Furniture	Hygiene	Printing	Insurance	Miscellaneous
	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1913	25.38	7.28	2.52	2.40	1.82	1.48	2.23	.64	.41	.41		.16	.01	.63
1917	29.84	8.73	2.93	2.46	2.03	1.99	1.05	1.12	.53	.20	.45	.11	.14	.56
Increase														
or	4.46	1.45	.40	.06	.21	.51	-1.18	.48	.12	-.21	.45	.05	.13	-.07
Decrease														

The chief increase, that in teachers' salaries, is due largely to the more generous attitude of the Board towards teachers and in part to a slight diminution in the size of the classes. In 1913 the average registration per teacher was 41.5 (14:1913:40). In 1917, for 191 regular grade classes, there was an average registration of 7612 pupils or an average of 39.85 per teacher. Thus there was an increase of 79 cents per pupil due to smaller classes calculated on the average salary for female teachers of \$861 (14:1917:31). This leaves \$3.67 to be accounted for by increase in salaries. It would also be found that caretaking costs

more, due to higher salaries for janitors as an economy had been effected in supplies to the extent of 5 cents per pupil. Likewise it may be seen that all items which show a decrease are such as are readily controllable and which may not seriously impair the quality of work for a time. Retrenchments here, however, cannot be long continued without eventual loss to the pupil. Other increases such as that for hygiene denote marked progress in the value of services rendered to the child. The small increase in the cost of books and supplies is not at all commensurate with the increase in the prices of these commodities since the war began, but it is rendered possible by doing without certain articles which were imported, by restricting the use of certain others, and by accepting an inferior quality in still other lines. The per capita cost of books and stationery has advanced from 92 cents to \$1.21, the former being lower than usual owing to a surplus of stock on hand at the beginning of the year. The average expenditure for this item for the past 10 years is \$1.20. A statement of costs per pupil for stationery and text-books for

Table 53. Cost per Pupil. Stationery and Texts, by Schools

School	1913	1914	1915	1916	1917
Bolton Street	\$.80	\$.59	\$.89	\$.98	\$1.09
Borden	.71	1.17		.89	.94
Breeze Avenue	.92	.88		.87	1.02
Cambridge Street	.92	.79	.83	.71	.96
Cartier Street	.88	.92	.86	.78	.89
Connaught	.88	.94	.83	.74	
Creighton Street	.94	.84	1.01	.87	1
Elgin Street	.96	.93	1.04	.83	1 0.
Evelyn Avenue	.71	.69	.67	.76	.61
First Avenue	.88	.73	.84	.91	.95
George Street	.98	.89	.99	.82	1.17
Glashan	1.01	.78	.10	.74	.92
Hopewell Avenue	.81	.80	.93	.86	.91
Higher English	1.77	2.46	3.03	1.32	1.56
Laurier Ave. & Slater St.	.93	.85	.96	.73	.99
Manual Arts		1.42	1.53	1.17	1.68
Mutchmor Street	1.07	.93	1.08	.91	.93
Osgoode Street	1.05	.75	.74	.88	.92
Percy Street	.73	.88	1.00	.86	1.12
Rideau Street	.96	.73	1.00	.71	.89
Wellington Street	1.18	.96	1.08	.72	.90
Orphan's Home	.48	.68	.66	.88	.69

the various schools, over a period of 5 years, shows that the special schools of Higher English and Manual Arts are relatively costly (see table 53). Other items would illustrate this fact in a more striking way. For example, the per pupil cost of teaching in the former school is \$46.85. Likewise if data were available it would be found that the special classes for the mentally defective cost the city much more than the ordinary grade, instruction alone here amounting to over \$71 per pupil.

There is much evidence of scientific economy being practised in the various departments of school work. The careful and systematic records kept of costs for each school; occasional circulars urging care in the use of material; measures taken by pupils to preserve the life of books, such as covering them; the re-binding of the more expensive texts, such as geographies; the careful collection and sale of waste paper and discarded books, all betoken an endeavour to conserve material and to eliminate waste.

Another angle from which costs might be viewed is that of the annual investment in each subject. Such a calculation, which must give a very close approximation has been made and the results given in table 54. Included with the running expenses of the system was an amount equivalent to 5 per cent on the value of the school plant. A certain amount was first deducted from the total expenditure for Athletics. Many of the male teachers spend much time on the playground directing games. A conservative estimate placed this at an average of one-half hour per day for each male teacher. Accordingly a proportionate amount of their salaries was apportioned to Athletics. It was also estimated that at least one-half of the expenditure for land has been made solely for the purpose of providing necessary play space. Five per cent of this valuation was also added. Then the expenses for Kindergarten teachers and supplies and a fair share of operating expenses and of valuation of plant allowed for the 19 Kindergarten rooms was deducted. The balance was then divided among the various subjects according to the number of pupils enrolled in each and the amount of time spent per week. The salaries of supervisors and the cost of special supplies were accredited to the corresponding subjects. The cost of operating the schools exclusive of interest was \$369,863 (13:1917:159). The valuation of school property was \$1,280,175 (25:1917:17).

Table 54.

Annual Investment per Subject, 1917.

	Special Salaries	Special Supplies	Proportion of General Costs	Total.
Athletics	\$ 5,873	\$ 595	\$ 9,343	\$15,811
Kindergarten	24,521	351	13,684	38,556
Reading and Literature....	.....	490	66,355	66,845
Arithmetic ....	.....	75	63,126	63,201
Composition ....	.....	.....	35,247	35,247
Spelling ....	.....	.....	29,880	30,044
Writing	1,220	100	25,787	27,107
Manual Training	12,030	2,892	9,551	24,473
Music	1,683	141	19,284	21,108
Physical Training	1,700	.....	19,284	20,984
Domestic Science	6,878	2,926	9,015	18,819
Art	1,220	866	15,418	17,304
Nature Study	44	291	15,600	15,935
Geography ....	.....	87	14,144	14,231
History ....	.....	41	9,015	9,056
Hygiene ....	.....	.....	6,822	6,822
Grammar ....	.....	42	4,820	4,862
Opening and Closing Exercises .....	.....	.....	3,545	3,545

RECOMMENDATIONS.

1. Assuming the consolidation of all the public educational effort in the city under one management, as formerly recommended, it would be interesting to note what a business corporation, with a similar investment in plant and with similar operating expenses, would do to ensure the greatest possible returns. A first consideration with them would be the employment of the best business brains procurable to manage their business interests; to buy and sell in the best markets; to locate and eliminate waste; to keep such record as would permit of comparison with their own past results and with those of similar concerns. A great city daily does not expect its editor-in-chief to assume the duties of business manager. The editor is free to devote his energies to what is more essentially the function and purpose of a newspaper by directing its larger policies and by regulating

its message and service to the community. Likewise the Superintendent or Senior Inspector of a school system should be freed from all concern except with matters of educational organization and administration and with the instructional needs of the community and how best to meet them. The transferring of all matters of finance to a business manager would add greatly to the efficiency of both branches of the work and would add little to the cost. The right man would save more than enough to pay his salary.

2. In view of the fact that many of the needed changes in the Ottawa Public Schools would entail increased expenditure, and in view of the fact that Ottawa's tax-rate is comparatively low, and that Separate School supporters here are now paying 5 mills more than those supporting Public Schools, the levy of one or even two additional mills would seem justifiable. This \$160,000 of extra revenue together with the economy resultant from a unifying of the administration of all schools would render possible many improvements that cannot now be undertaken.

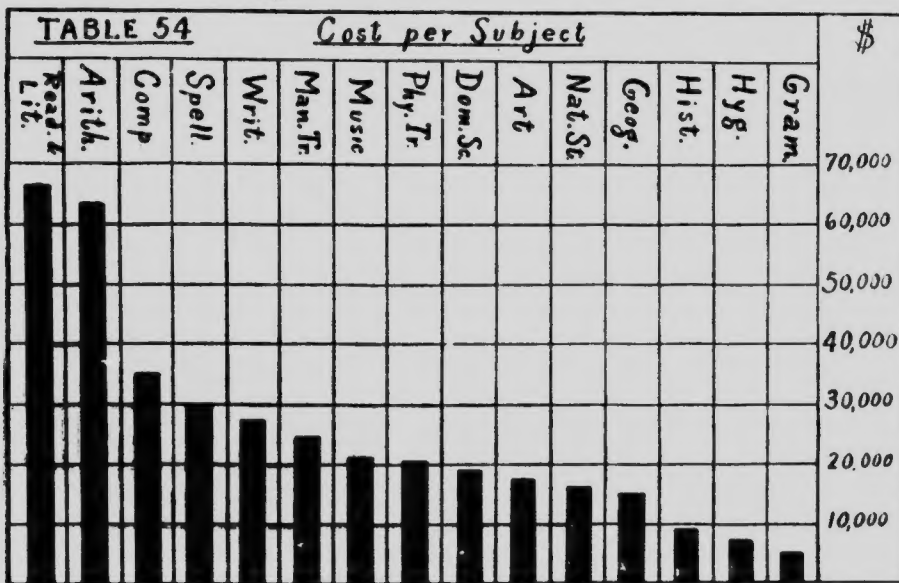
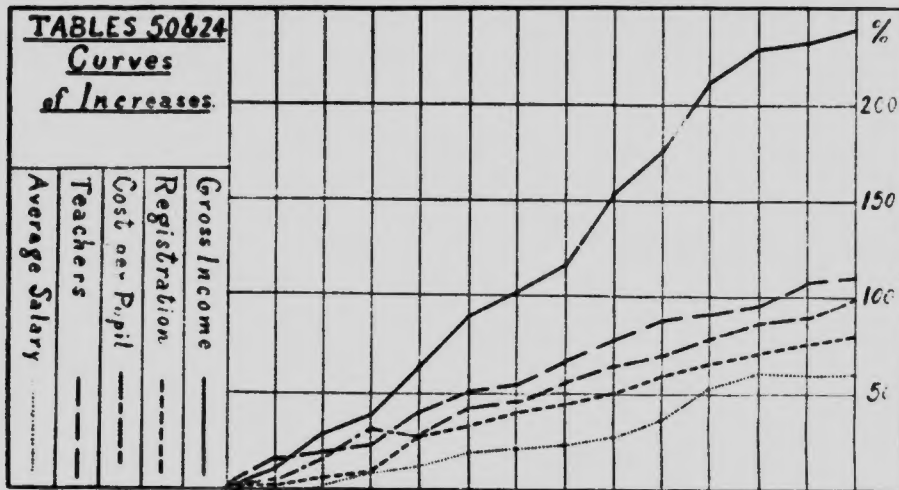
CONCLUSION.

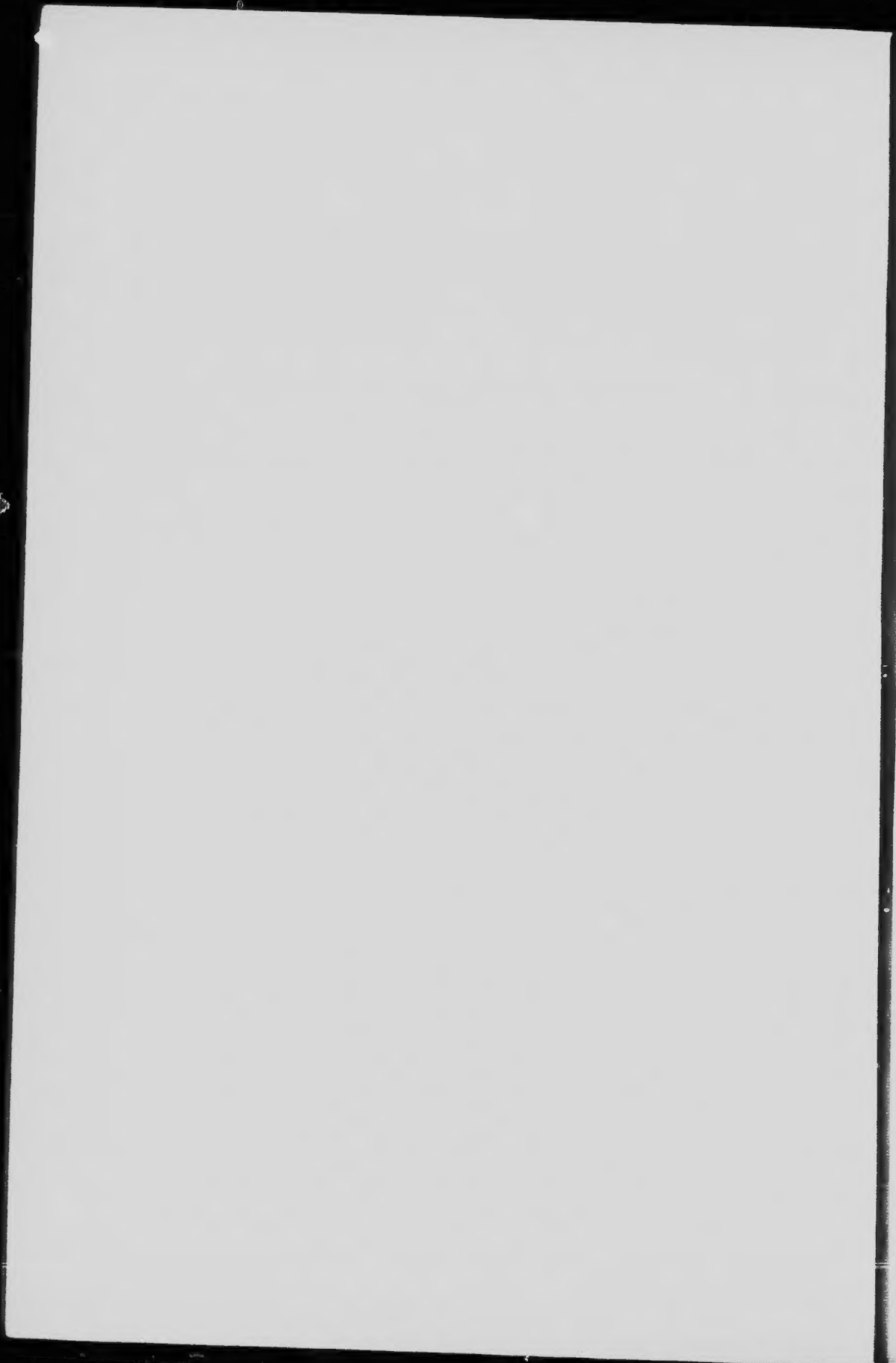
It has not been assumed that all the changes recommended in the preceding chapters can, or ought to be, made immediately. Many could, and should, take effect at once. Others must wait upon the successful completion of certain more fundamental changes suggested. Still others can only be the product of growth or evolution, such as the building up of a public opinion, or the training of a staff. Others, again, are in the nature of a tentative makeshift until some of the more revolutionary changes have been made. It has been impossible to follow up some of the suggestions by others which would logically grow out of them by reason of the fact that this would entail a more minute examination of the Separate and Secondary Schools than space would permit.

It is recognized that the Schools in many respects could scarcely be other than they are at the present time and accordingly suggestions made in such cases are not given in the way of criticism but by way of pointing to further growth. The needs of to-morrow often grow out of conditions but now in the process of formation. Schools will probably never reach perfection but ought always to keep aiming higher. The conclusion of this survey is that the Public Schools of Ottawa have already attained a high state of efficiency and are in a healthy state of growth. The Chairman of the Federal Commission on Industrial

TABLE 46 School Revenue per Capita.								
Hamilton								
London								
Ont. Cities								
Ottawa								
	\$	1	2	3	4	5	6	7

TABLE 47 Cost per Pupil.				
	\$10	20	30	40
Hamilton				
Ont. Cities				
London				
Ottawa				





Education says: "Although accustomed to coming in contact with school boards from Halifax to Vancouver, I have never met or seen a better conducted set of schools than those in Ottawa."

A survey must never be static or final. It is hoped that School Board, Officials, Teachers, and Ratepayers will make it continuous by applying methods of exact measurement, by keeping informed of standards attained by others, and by striving to surpass these as well as their own past records.

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